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THE DISTRIBUTIVE IMPACT OF THE GOVERNMENT'S POLICIES: AN ASSESSMENT OF THE SITUATIONS IN THAILAND*

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I. INTRODUCTION

Throughout the modern history of economic development, particularly the last 20 years or so, various emphases had been placed upon certain aspects of development strategies by development economists, planners, and administrators. In the beginning of systematic development efforts -- around the middle of 1950's -- we saw emphasis being given to industrialization of the economy based upon the concept of economic dualism. Most underdeveloped economies were characterized by the coexistence of a large but backward traditional or farm sector with labour surplus situation, and a small but more advanced industrial or manufacturing sector. At first import subsitution received particular attention in most developing countries, then export promotion, and finally the structural transformation of the country from agricultural economy to industrial economy that could sustain the growth process by itself. During these phases, the development ideas called for the building up of physical and social infrastructures, high savings rates, high capital formation, investment in human resources, increased productivity in all sectors, controlled population growth, and so on. To help manage these intertwined development strategies, development planning was needed and had hence become a widespread practice in the developing world.

But most of the above-mentioned development strategies adopted by most developing nations aimed mainly at only one aspect of economic

objective: resource allocation. The rate of growth of GNP per capita was regarded as one of the most, if not the most, important indicators of economic development process, and the experience in most developing countries had shown that this growth objective was met with great success. However, while the allocative objective was earnestly persued, the distributive objective was, to a large extent, neglected. So while many developing countries have succeeded in raising the GNP to a reasonably high level, the fruits of this economic growth have not been equally shared by the majority of the population but were reaped by a small group of the people. In general, only the relative income distribution between various groups (mainly between the rich and the poor) worsened, but in some case it has been argued that the absolute income distribution also worsened, meaning that some people actually became poorer in absolute terms even when the national income had increased (1, p. 129). Although this worsening of income distribution during the development process was expected by some development theorists (Lewis [38], Kuznets [34]), social, political, or even ethical considerations dictate that this situation be alleviated or reversed as soon as possible.

The economic development of Thailand fits the above pattern rather well. After almost 20 years of systematic development efforts starting around early 1960's, Thai economy has grown tremendously in terms of GDP. But during these periods, it seems that the disparity in the distribution of income has increased as this was shown in many

studies using available data in 1963, 1969 and 1972 (Meesook [42], Krongkaew [29], Wattanavitukul [65]). This problem was noticed as early as the beginning of the 1970's as reduction of income inequality was included as one of the objectives in the Third National Economic Development Plan launched in 1972, but no deliberate or discernible attempts were made by the Government to tackle the problem. The change of attitude came around the middle of 1970's when the country experienced the growing unrest in various segments of the society and witnessed the fate of many neighbouring countries to socialism. This time social welfare and equity received more genuine interest from the Government. The fourth National Economic and Social Development Plan (1977-1981) clearly stated that

> "... several basic policy reforms are considered necessary for promoting greater economic and social order which would mean an eventual eradication of poverty among a large segment of the population. In order to achieve this new socio-economic objective, the Government must intensify its own efforts, accept more responsibility and give full commitment to the basic policy recommendation outlined in the Fourth Plan. Secondly, the Government must act in several key sectors to promote more social justice and ensure that the benefits of development are shared out more equitably."

Whether the Plan will succeed in what it intended to do remains to be seen. A close observation of the economic situation in Thailand reveals that there is still inadequate understanding of the distributive picture of personal income in Thailand: income-in-kind as well as other non-money incomes and capital gains were left out of income

distribution data, and money income itself was usually underreported. But these problems are being solved through improved statistical techniques and more careful surveys. What is still much lacking is the knowledge or basic understanding of how the government policies affect the distribution of income of the people. Without knowing these very important effects of government activities or at least giving them serious thought, formulation of policies or plans are not only ineffective in fostering greater equality of income distribution, but also detrimental to the very objective the government is trying to reach.

The purpose of this paper, therefore, is to attempt to study the distributive impact of a few important public policies in the first 15 years or so after Thailand embarked upon conscious economic development programs in the early 1960's. The paper will be a mixture of conclusions drawn from analytical models, outcomes of simulation studies, results of empirical research, and many educated "guesses" about the possible distributive impact of various public policies.

The plan of the paper is as follows: Chapter II briefly discusses the debate on the possible trade-off between the effects of policies that will facilitate growth and policies that will promote equity. It aims to recount several studies done on the issue to show that properly-designed, equity-based policies either have very little or no harmful effects at all on growth and, in some cases, can even enhance it. Then the role and policy options of the government

are discussed, with classification into two broad types: budgetary and non-budgetary policies. Chapter III describes the structure of the Thai fiscal system setting a framework of analysis for Chapters IV and V which proceeds to present empirical estimates of the so-called incidence of taxes and public expenditures.

When the distributive impact of non-budgetary policies is discussed in Chapter VI, we are now entering the area where very little empirical research has been done on the topic at issue. It is here that the author will try to explore theoretical attempts at studying the income distributional effects of certain public, non-budgetary policies. Three specific areas are selected: agriculture, industry, and labour. Finally Chapter VII will attempt to integrate the distributive effects of both broad types of policies as discussed in the previous chapters; and some overall assessments will be mentioned.

The author will not hesitate to offer a caveat that this paper is by no means a definitive study on the distributive impact of governments's policies; the conceptual framework, the availability of data, or even the clearness of ideas are still too imperfect for that. With a possible exception of the budget incidence study, the author can give little more than qualitative judgments on such impact. Even in the budget incidence study, which was done with great care, an enormous amount of difficulty remains: many conceptual problems concerning the shifting of tax burdens or expenditure benefits are

II. GROWTH, EQUITY, AND GOVERNMENT INTERVENTION

Growth and Equity Relationship

The problem of possible trade-off between growth and equity was realized long ago in economic literature. The issue of growth versus equity with specific reference to developing countries was seriously discussed in the early 1950's. W. Arthur Lewis used to liken the problem of growth and equity in income as the case of two horses with the rider having to decide which one to ride at a time. (Lewis [38]). The significance of this analogy is that the selection of one objective necessitates a sacrifice of the other objective: if growth is to be pursued, then the problem of inequality would have to be experienced. In 1955 Simon Kuznets [34] provided the most decisive thought on the relationship between economic growth and income distribution during the economic development process. The study of past patterns of growth and income shares of many industrialized countries led him to conclude that as the economy begins to grow rapidly, the distribution of personal income will first worsen, but when the economy reaches a certain level of economic development such distribution of income will improve. Translated into a graphical diagram where the level of development (e.g. income per capita) is measured on the horizontal axis and income inequality on the vertical axis, Kuznets' idea would imply an inverted-U curve upon the relationship between economic growth and income inequality.

Kuznets' hypothesis was confirmed by subsequent empirical studies by Kravis [26] and Oshima [49]. Although these studies involved mainly the empirical test of Kuznets' thesis, some explanations were given as to why this inverted U-shaped curve phenomenon cause about Kuznets himself observed that the worsening of income distribution in the early period of development could be due to the proportionally greater accumulation of wealth or assets by the rich as compared to the poor. This situation aggravated as the country became urbanized, further enhancing the position of the rich probably until the low-income groups had gained some political influence. Perhaps we can even go back to the reason given by Lewis in his original article [37] which argued that the profit share of the modern sector is relatively larger than that of the traditional sector which is beset by oversupply of labour and virtually zero marginal productivity. In a similar labour-surplus situation, Fei and Ranis [18] hypothesized that in order to develop the modern sector as the leading sector in the economy, the wage in the traditional sector is kept low, thus the worker in the modern sector is always better off than his counterpart in the traditional sector in the early stages of economic growth. Only when the withdrawal of labour from agricultural sector begins to affect the production of food leading to a rise in farm wages that this sectoral disparity begins to narrow down.

More recent empirical investigations also attest to the validity of Kuznets' hypothesis. In a cross-sectional study of 44

developing countries, Adelman and Morris [1] found a statistically significant negative relationship between income inequality and per capita income, although the degree of explanation is very low. They further indicated that, for the very poor, development had brought not only a relative but also absolute decline in the average income. Time-series studies by Fishlow [20] in Brazil and by Weisskoff [66] in Mexico, Puerto Rico, and Argentina also showed that income concentration in these countries increased during periods of rapid economic growth.

Two studies by Ahluwalia deserve our special attention. In the first study published in 1973 [3] he used time-series income distribution data of several developing countries compiled by the World Bank to test the relationship between economic growth and income inequality. Of 13 developing countries which he studied, six showed increasing inequality, another six showed the opposite result, and one showed no change in the level of concentration. He also found that no association existed between the growth rates of these countries and their trends in distribution; and perhaps most significant of all, that countries which experienced increased income inequality had higher average per capita income than those having reduced income inequality which is more or less contrary to what Kuznets' hypothesis. It seemed that Kuznets' hypothesis was being refuted. However, in 1976, Ahluwalia [4] undertook another study, this time using the cross-country data of 60 countries divided into 40 LDC's, 14 DC's, and

6 socialist countries. Multivariate regression analysis was used to estimate cross-country relationship between the income share of different percentile groups and other selected variables reflecting aspects of the development process that are likely to influence income inequality such as per capita GNP, educational and skill characteristics, and other demographic variables. One major result showed that income shares of all percentile groups except the top 20 first declined and then rose as per capita GNP increased. But whereas the long-run development may be associated with increased inequality, Ahluwalia found that this may not be so far the short-run, that is to say, a faster rate of growth does not necessarily lead to greater inequality. Whether this conclusion means that a country can pass through this initial period of income disparity quickly with high-growth policies without fear of having greater disparity than it normally would have, is still not clear. Ahluwalia himself admitted that this latter conclusion could not be made strongly due to imperfections in techniques and data.

Therefore, Ahluwalia has done studies that both confirm and refute Kuznets' hypothesis. But in his second study, he took pains to point out that the use of cross-country data for this kind of analysis was not the most appropriate method. The time-series technique would be more appropriate, but relevant data in most developing countries were simply not available or inadequate. Furthermore, while the result had shown that there was associational relationship between

income distribution and the process of development, it did not always imply the underlying causal relationship between the two.

On these bases, then, many researchers (e.g. Fields [19], Cline [16])still refuse to accept Kuznets' hypothesis as a compelling argument linking inequality with growth. If one of the reasons leading to the Kuznets' effects is that growth process favors the rich over the poor because most of the savings come from the former, and a policy designed to redistribute income (or help the poor) would cut into this savings rate and growth would be stunted as a result, then one round-about way to refute this thesis is to be able to demonstrate that income resistribution has a neutral or at most negligible adverse effect upon growth.

In one of the most detailed surveys of studies concerning distribution and development, William R. Cline [16] listed more than ten simulation studies which purported to show that indeed redistribution of income had a largely neutral effect on economic growth. It would be very tedious to describe the methods of study and exact findings of these studies here. To cite just one example, Dennis L. Chinn [14], in trying to show that severe inequality is not a necessary condition for growth, developed a model based on a case study where a redistributive policy took the form of a special direct tax on middle and high income households, and the tax revenues were used to finance programs which augment the income of the poor. The effect

of this policy was traced through the changes in the level and pattern of private expenditures. The induced change in private savings could then be estimated as the difference between the changes in private income and total private expenditure. Then, based on past propensities to import (or to consume generally), it was possible to estimate the induced changes in the pattern of expenditure in the absence of any increase in the level of private expenditures. Using input-output table as a link between consumption and production, Chinn was able to estimate the effects of redistribution policy on industrial output levels and other growth variables. One major conclusion from his study was that income redistribution large enough to significantly reduce the extent of poverty would have only negligible effects on the prospects for continued rapid growth.

To sum up, on theoretical grounds, it is possible to construct a logical model which shows that equity-based policies do not necessarily hurt economic growth. On empirical grounds, results of studies of the relationship between growth and distribution of income during the development process appeared to be mixed and inconclusive, though the majority of views seemed to be sympathetic to the inverted U-curve phenomenon. What should be best accepted here, however, is a compromise conclusion that whether or not rapid growth creates more inequality in income distribution is less important than whether income redistributive policies adversely affect growth. And it is reasonable to surmise

further that effects of income redistribution on growth should, in most cases, be neutral, or if not, very negligible on the negative side. Perhaps the spirit of such a belief is captured in the conclusion made by Cline [15] after a study of economic development of various Latin American countries that policy to redistribute income may result in some decrease in the savings and growth of the economy but not large enough to harm the overall development of the country; on the contrary, the benefit, in the form of increase in income of the majority of the people at present and in the future will more than offset the sacrifice in the growth rate. It is Cline's conviction that the majority of the population of Argentina, Brazil, and Mexico would be much better off if their governments had selected development policies which emphasized more equitable income distribution but with a lower rate of growth rather than selected policies of high growth in the situations where income disparities were already very serious.

A new line of thought has recently been taken up by the World Bank and other international or national organizations such as the International Labour Otganization (ILO), the Economic and Social Commission for Asia and the Pacific (ESCAP), and the United States' Agency for International Development (USAID) regarding the proper role of income distribution in economic development. All views seem to point to the direction of elevating the importance of distributive problem in economic development. Once these organizations are determined to give an added importance to income distribution, they can

The Government as Income Redistributor

So, in the late 1970's, we see the World Bank committing its personnel to income distribution and poverty research and its finance to "growth-with-redistribution" loans all over the world. The ILO, which started with full employment programmes in the 1960's has shifted its interest further down to tackle the problems of really poor target groups on the basic needs approach. The USAID is understood to be streamlining its foreign aid strategies for the 1980's to be more responsive to income distribution problems, and so is the ESCAP regarding its research and policy activities. But to implement a policy that will help toward greater equality of income will need first and formost the effective participation, if not initiation, and leadership of the government of the country concerned. If the government is not genuinely interested in these matters, the drive to equalize income could be futile. Although it has been argued (Weisskopf [67]) that most developing countries consist of class structure where the power is concentrated in a small group of ruling elites, and under this structure, the government and other state apparatus will be controlled by this group or at least are responsive to the benefits of this group, the preservation of power may still require keeping the masses happy by reasonable social and redistribution policies or elimination of grinding poverty or both.

In certain capitalistic countries the intervention of the government in the private sector is looked upon with suspicion and

distaste. The best service that the government could give to the private sector, it is often argued, is to leave it alone. But nowadays this sentiment has changed or is changing. The failure of the market mechanism to cope with monopolistic practices, externalities, proper distribution, and price stabilization has given rise to continued involvement of the public sector in the economy, as this can be seen in the ever-increasing share of government sector in the national income.

As regards its role in income distribution, it is convenient to divide policy instruments of the government into two braod categories: budgetary policy instruments and non-budgetary instruments.

(a) Budgetary policies

Fiscal functions of the government are discharged on the one side through the collection of public revenue and on the other side through public spending. As the spending of the government must conform to the predetermined budget where the ability to finance that spending has already been taken into account, these two fiscal activities (public revenues and expenditures) are categorized as budgetary policies. Public revenues are collected mainly from taxation, fees and charges, proceeds from sales of government's goods and services, and from domestic and foreign borrowings, whereas public expenditures include compensations in the form of wages and salaries, purchases of goods and services, capital investment, and direct transfers.

Public revenues can affect distribution in several ways. Taxation which is defined as compulsory collection of money from the people by the state without the latter's obligation to match such tax with equal amount of public spending, creates a burden on taxpayers by reducing their real income and effects a change in the distribution of income by causing different burdens upon different taxpayers. An income-equalizing tax system is one which is normally based on the "ability-to pay" principle whereby more burdens are created upon those who are better able to pay. Fees, charges, and revenues from government's sales may not change the distribution of income very much because they operate on the "benefit" principle whereby the payers' benefit is exactly equal to the amount they pay. Still these non-tax revenues could be made income redistributive by discriminatory pricing, public monopoly, or subsidization. Finally, the creation or reduction of public debt through public borrowing could have redistributive repercussions through changes in the price level brought about by the change in the money supply or simply through the transfer of income from group of taxpayers to another.

As for public expenditures, their redistributive effects are sometimes easier to perceive, sometimes more difficult. A direct transfer such as government's aid to the handicapped or pensions to retired civil servants would directly increase the recipient's relative income positions. Many types of public expenditures benefit clear-cout groups of people, for example, education expenditures benefits those

who receive the educational services or those who have children in schools; highways expenditures benefit road users or those whose livelihood has improved as a result of a new road service, and so on. These "specific" expenditures the benefits of which are allocable to identifiable groups of beneficiaries can enhance the income positions of those who benefit from them specifically. There are other types of public expenditures, however, that may not benefit any groups specifically, but all groups generally. Benefits from these "public good-type" expenditures, such as defence and law enforcement, if proven to be truly unallocable, may be shared in equal amount by all.

(b) Non-budgetary policies

Policies which do not originate from or are not mainly controlled by the central government's budget are classified as non-budgetary policies. Examples of these non-budgetary policies are domestic price control, foreign trade promotion and restriction, private investment promotion, minimum wages and labour protection, population control and family planning, monetary and credit control, industrial health and safety standard, and so on. In short, they consist of, among other things, government's rules and regulations.

Often the line cannot be clearly drawn between policies which are budgetary and non-budgetary. Take an example of price control policy. In enforcing the control of a certain price level, say a retail price of rice, the government must maintain officials who will see to it that the rules are being adhered to. These officials may

continue to draw their salaries from the budget, so this policy can be seen in part as a budgetary policy. This is correct but such policy is intended to be seen in the light of what effects it would have on the distribution of income of those who have to buy rice. The price-controlled officials' salaries are probably already included in the "general government" category of public expenditures. So this policy is better regarded as a non-budgetary policy.

To estimate the distributive effects of non-budgetary policies is very difficult. Unlike the practice in the estimation of distributive impact of public revenues and expenditures, or what is also known as "budget incidence" estimation, there is no uniform techniques of measuring the distributive impact of non-budgetary policies. Each policy must be considered separately, and even simple partial equilibrium impact is difficult to gauge, let alone the tracing of full effects through a general equilibrium framework. Even the simplest form of general equilibrium framework cannot avoid very simplifying assumptions regarding the state of economy, so much that it becomes useless as a policy tool. Therefore, at this stage of knowledge, estimating the impact of many non-budgetary policies on personal distribution of income is probably no better than just an educated guess. Still, this is worth exploring.

Distribution of Household Income in Thailand

Before proceeding to the analysis of government policies on income distribution in Thailand, it is necessary to know something

about the situations concerning the distribution of income of Thai households first. As of 1978, there were several estimates of income distribution in Thailand for various years. Even for the same year the results were not identical because different sets of data were used in the computation: some used preliminary data, some published data, some more detailed data from worksheets, and some original data tapes with some retabulations. Moreover, since the data were not detailed enough, some interpolations were carried out by some researchers regarding the breakdown of income classes and number of households in each class, further diversifying the final results. However, most studies are comparable intertemporally, meaning that they showed the trend of income distribution going more or less in the same direction, only the magnitude was slightly different.

Income distribution estimates by the present author will be used in this paper for the simple reasons that the same methods of computation was consistently used for the three periods that published data were available, namely 1962/63, 1968/69, and 1971/73, and that these income distribution estimates were used as bases for computing budget incidence for the same three periods which will be the subject of discussion in Chapters IV and V. These estimates used the published results of the surveys of household incomes, expenditures and other socio-economic characteristics (NSO [46], [47], [48]). Although in two of the three estimates, "adjusted" income defined as money income plus income-in-kind, underreported income, imputed rent, net retained

earnings, and indirect taxes was estimated, the inconsistency of some of the non-money income data for the latest period (1971/73) ruled out the comparability of the complete series for adjusted income distribution. Therefore, only money income distribution will be presented here (3 p. 129).

Table 1: Distribution of Money Income of Thai Households by Income Class; 1963, 1969 and 1972

(Percentages)

Income Class (baht)	1963		1969		1972	
	% Families	% Income	% Families	% Income	% Families	% Income
Under 3000	48.1	13.0	24.1	3.7	27.4	3.8
3000 - 5999	20.8	14.0	23.8	9.3	23.1	8.3
6000 - 8999	19.5	26.4	16.0	10.6	13.7	8.3
9000 -11999			9.9	9.2	9.1	7.9
12000 -14999	5.8	13.1	6.8	8.1	6.5	7.2
15000 -17999			4.6	6.8	3.6	5.0
18000 -29999	5.8	33.5	14.8	52.3	9.7	18.5
30000 and Over					6.9	41.0
All classes	100.0	100.0	100.0	100.0	100.0	100.0

Source: Krongkaew [29]

Table 2: Distribution of Money Income of Thai Households by Quintile Group: 1963, 1969 and 1972

Quintile Group	Share of Money Income (%)		
	1963	1969	1972
Lowest 20%	2.9	3.4	2.4
Second 20%	6.2	6.1	5.1
Third 20%	10.5	10.4	9.7
Fourth 20%	20.9	19.2	18.4
Top 20%	59.5	60.9	64.4
Within top 20% Group			
Top 10%	42.2	43.9	47.5
Top 5%	28.4	31.1	35.5
Top 1%	9.6	10.5	15.0

Source: Krongkaew [29]

It may be argued that using money income as a unit of distribution in such a country as Thailand overstates the extent of income inequality because the majority of low-income households who live in the rural areas receive large proportion of their income in non-money forms (such as rice grown for home consumption, goods received free). This is true, but it is also true that much of the income of the high-income groups also escape detection. If more than one period of income distributions are compared, then this problem of understating positions of low-income households in substantially reduced because what becomes more important now is the trend of

changes in distribution, not its magnitude. As long as the method of computing money income distribution is consistent for all periods under study which are not long enough for the people to change their habits of acquiring their incomes from money vis-à-vis non-money sources, then the use of multi-period money income distribution is still useful.

Table 1 shows a comparison of the percentage distribution of money income of households for the whole kingdom for the years 1963, 1969 and 1972. Households are divided into 8 income classes, but for the earlier periods, data were only detailed enough for 5 and 7 classes. The lowest income bracket starts at under 3,000 baht per annum per average family, whereas the highest income bracket begins at 30,000 baht and over. The use of the size of income as reference unit may not be very useful in a multi-period comparison because price increases from one period to the other change the meaning of the same income bracket. Still it is useful in showing how income has changed or how families moved in and out of a certain income bracket. For example, in 1963, 48.1% of households received 13.0% of total money income, but in 1969 only 24.1% remained in this lowest income class, receiving 3.7% of total money income. In 1972, the trend appears to worsen as 27.4% of households are found in this bracket sharing only 3.8% of total money income. As for the households in highest and next-to-highest bracket (18,000 baht and over), their numbers increased steadily, and so did their shares in total money income.

Table 2 where households are classified into quintile groups instead of different income classes offers a more convenient way for comparison. Here, no matter how the level of income has changed, the relative positions as to what proportion of households has how much share of total income still remain the same. The quintile proportion was selected because it was detailed enough for policy purpose without sacrificing the base for analytical evaluation. In addition, the top 20% group of households were further subdivided into top 10%, top 5%, and top 1% to show the extent of income concentration.

In 1963, the lowest 20% of households received 2.9% of total money income compared to 3.4% and 2.4% in 1969 and 1972, respectively. Clearly, the trend here has been an improvement then a decline. In contrast, the share of the highest 20% group increased from 59.5% to 60.9% to 64.4% from 1963 to 1969 and 1972 respectively - a continuous improvement in income positions - whereas the bulk of households in the middle 60% experienced a continuous decline in their income shares. Obviously this pattern of income distribution should indicate the worsening of income equality. To see whether this is the case, Gini concentration ratios or Gini coefficients were estimated for the distributions of the three periods.

The method of computing the Gini coefficients employed here was not the ordinary "trapezoidal" method where area under the Lorenz curve is measured by adding up all the trapezoids that are constructed

between points of observation - the method which tends to underestimate the Gini coefficient - but the method suggested by Kakwani and Podder /69/ which is much more sophisticated and more reliable. Essentially, the method calls for the estimate of the mathematical function of Lorenz curve, from where the parameter values can be manipulated to yield various other estimates such as the Gini coefficient and, in fact, the distribution of income by fractile groups like the one shown in Table 2.

The estimates of Gini coefficient for 1963, 1969, and 1972 are given below in Table 3.

Table 3: Gini Coefficients of the Distribution of Money Income in 1963, 1969, and 1972

Year	Gini Coefficient
1963	0.5627
1969	0.5550
1972	0.6051

Source: Krongkaew /29/

From Table 3, it appears that the overall distribution of money income improved slightly from 1963 to 1969. But the extent of improvement was so small (only about 1.4%) that this could be attributable to statistical errors. Even if it was not, then from Table 2 it can be that the improvement was possible as a result of

a redistribution of income from the middle 60% to the lowest 20% as well as to the highest 20%, hardly a desirable type of income redistribution. Moreover, the coefficients computed for the distribution of more complete "adjusted" income between these two periods (not shown here) did show a clear increase of income inequality (4, p. 129). So, a more appropriate interpretation regarding income distribution between 1963 and 1969 would be that the distribution of income between these two periods remained unchanged.

But the distributive picture for 1972 showed a clear declining trend in income equality. The level of distributive deterioration was 9.0% compared with 1969, and 7.5% compared with 1963. From Table 2 again, it is seen that all but the top 20% groups of households lost their relative shares of income compared to the situation in 1963. Within the top 20% which gained absolutely and relatively, the top 1% of households probably gained the most. It is quite safe, therefore, to say that there is a declining trend in the distribution of income in Thailand between 1963 and 1972, not so much and in fact quite stable in the early part, but very marked recently. The results of the socio-economic survey for 1975/76 which were in press as of end of 1978 should provide another data-set to show whether this declining trend continues. It is entirely possible for the trend in income equality to turn up for 1975/76, but from the qualitative observations of the present situations in Thailand,

it is rather unlikely that the improvement in income distribution, if any, will be very great. On the contrary, it will not be surprising if the present worsening trend will hold or continue.

To facilitate the analysis in the next section, it should be mentioned here that these income distributions are regarded as the "pre-fisc" income distributions, that is the distributions before which the distributive effects of taxes and public expenditures are added. They will form the bases upon which the incidence of budgetary as well as non-budgetary policies are applied or evaluated (5, p. 129).

III. Structure of Thai Fiscal System

The structure of Thai fiscal system is highly centralized. On the revenue side most taxes are collected in Bangkok where the seat of the government is located. In every province and district, there will be one or more tax officials or other officials who are authorized to collect taxes or fees, but practically all revenues will flow into Bangkok. The local governments are small, have very little taxing power, and have to depend almost entirely on central government's grants-in-aid. On the expenditure side, the budgetary appropriations are allocated to ministries, all are located in Bangkok, and then the money flows out into the provinces and districts.

Public Revenues

There are four major categories of public revenues of the central government: taxes, fees and charges, and proceeds from government's of goods and services. The Department of Revenue is the largest collector of tax revenues. Taxes that are under the jurisdiction of the Revenue Department are individual income tax, corporate income tax, business tax, entertainment tax and stamp duty. Other major tax collecting departments are Department of Customs (import and export taxes) and Department of Excise (beverage and tobacco taxes and taxes on petroleum products). These tax revenues together amount to about four-fifths of total public revenue generally (6, p. 129). There are other departments which provide the government with sources of revenue, for instance, various departments

of Ministry of Interior collect fees on licences and permits, on registration of property, and also taxes on automobiles. Major royalties on minerals and wood are collected by Departments of National Resources and Forestry respectively, and various government's monopolies and enterprises contribute some of their profits to the general fund.

The compositions of public revenues for typical years are given in Table 4. In 1972 which will be used as a reference for our incidence study, total public revenues were 21,296.7 million baht, of which 5,641.4 million baht or 26.5% originated from import duties, 4,446.9 million baht or 20.9% from business tax, and 3,531.7 million baht or 16.6% from excise and petroleum taxes. Notice that the individual income tax was only 1,555.9 million baht or 7.3% of the total revenue which is very low even among developing countries.

As can be seen from Table 4, the structure of the revenue system of Thailand has not changed much in the several years; indirect taxes were still the major sources of government income. Income tax had increased somewhat but was still a minor tax. It should be mentioned, however, that in the ten years between 1963 and 1972 (data not shown here), the proportion of import tax to total revenues declined substantially, that is from 31.4% in 1963 to 28.6% and 26.5% in 1969 and 1972, respectively. During these same periods, the proportion of business tax to total revenues increased from 17.7% in 1963 to 18.8% and 20.2% in 1969 and 1972, respectively. Without

Table 4: Public Revenues of Central Government: 1972, 1974 and 1976

(million baht)

	1972		1974*		1976*	
	Amount	%	Amount	%	Amount	%
1. Individual Income Tax	1555.9	7.3	2045.0	5.4	3037.0	7.2
2. Corporate Income Tax	994.1	4.7	2684.0	7.1	3769.0	8.9
3. Specific Sales Taxes	3531.7	16.6	6162.0	16.2	7776.0	18.4
4. Business Tax	4446.9	20.9	7600.0	20.0	9372.0	22.2
5. Import Duty	5641.4	26.5	8563.0	22.6	9052.0	21.4
6. Rice Premium	246.0	1.2	2752.0	7.3	42.0	0.1
7. Other Export Tax	163.2	0.7	1621.0	4.3	1248.0	3.0
8. Taxes on Property	604.2	2.8	413.0	1.1	470.0	1.1
9. Royalties and Fees	847.6	4.0	} 2380.0	6.3	} 1380.0	3.3
10. Government Sales	648.8	3.0				
11. Government Monopolies	866.9	4.1	1020.0	2.7	1728.0	4.1
12. Government Enterprises	821.5	3.8	962.0	2.5	2098.0	5.0
13. Other Revenues	928.5	4.4	1723.0	4.5	2233.0	5.3
14. Total Revenues	21296.7	100.0	37925.0	100.0	42205.0	100.0

Source: Department of Comptroller-General

Note: *Not adjusted for burden on foreign consumers.

considering other factors, this phenomenon could be a reflection of the success in import substitution policy of the country. Other changes included the rice premium which has fallen in proportional share from as much as 10% of total revenues in the past to less than 1% in 1972, and nowadays is no longer a major source of public revenues, and the

excise tax which has increased in size in the last decade mainly due to the increase in fuel and other energy consumption.

Public Expenditures

As for public expenditures, they are executed through the budget system which delimits scope and type of spending every year. The Thai fiscal year starts October 1st of the previous year and ends September 30th of the year in question. The preparation of the central government's budget is regulated by the Budgetary Procedure Act, B.E. 2502, and involves many government organizations at each stage of the preparation. The most important organizations include various offices of the Ministry of Finance, the National Economic and Social Development Board (NESDB), the Bureau of the Budget (BB), and the Bank of Thailand (BOT). The main functions of Ministry of Finance are the setting of policies concerning taxation and tax administration. Furthermore, Ministry of Finance has a part in public debt management in cooperation with the Bank of Thailand in case of domestic debt, and with the Foreign Loans Subcommittee of the NESDB in case of foreign debt. The final decision, however, lies with the Council of Ministers.

The responsibilities for allocation of funds or public income are spread among the Bureau of the Budget, the Department of Technical and Economic Cooperation (DTEC), the Foreign Loans Subcommittee of the NESDB, and the State Service Commission (SSC). Although these

four organizations are attached to the same Prime Minister's Office, their work is not well coordinated. The Bureau of the Budget is only responsible for budgetary allocations; it is not involved in the state's revenues, especially foreign aids or foreign loans of which their allocations are handled by the DTEC. And the control of foreign loans by all government organizations including local governments and public enterprises is shared between the Foreign Loans Subcommittee of the NLSDB and the Fiscal Policy Office of the Ministry of Finance.

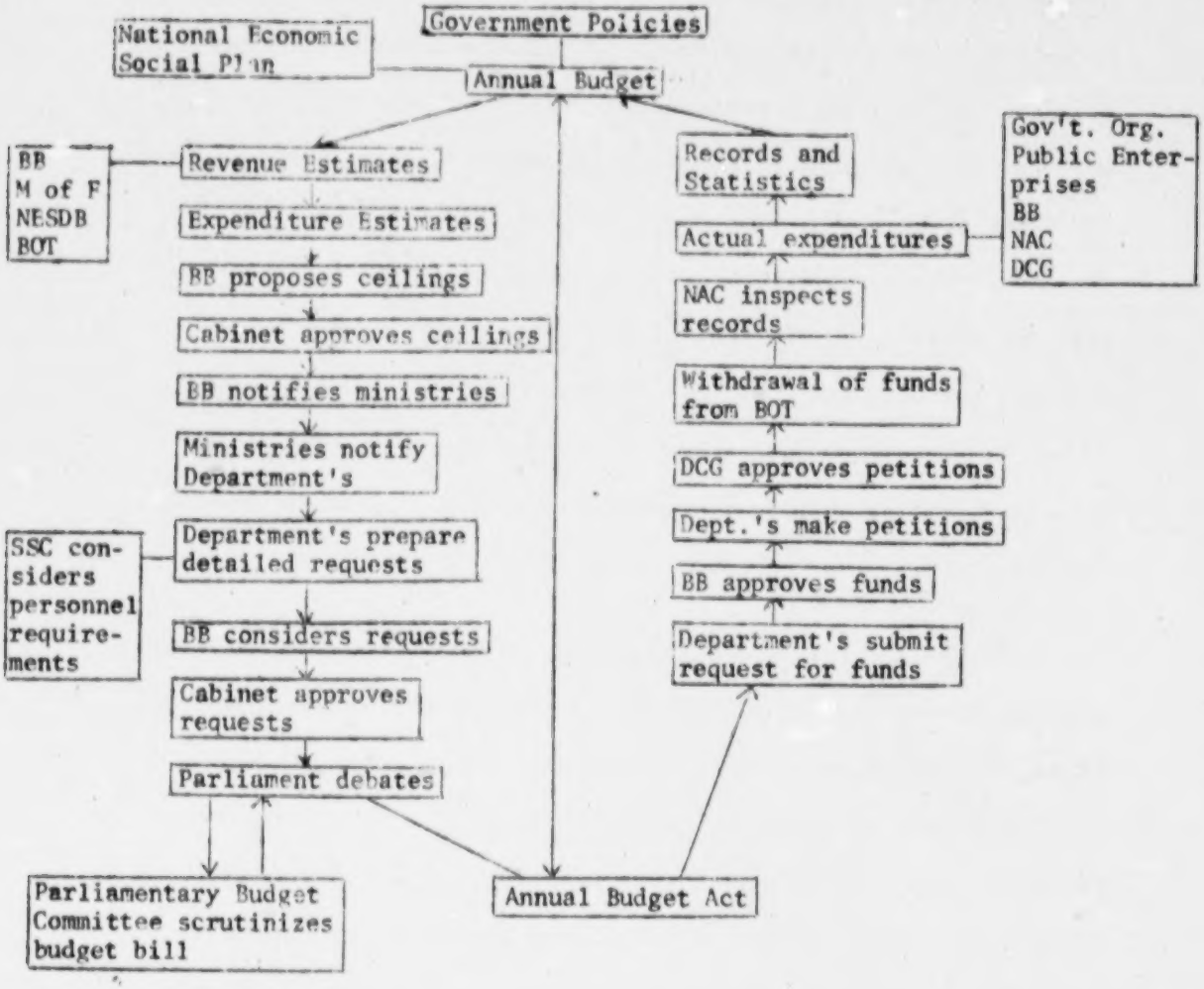
The word "budget" in the present use includes both revenue budget and expenditure budget. Revenue budget consists of total revenue estimates plus domestic borrowings, mint receipt, and treasury balances. Domestic borrowings are determined by agreement between the Ministry of Finance, the Bank of Thailand, and the Bureau of the Budget within the limit allowed by the law. As for expenditure budget, first there will be a meeting between the Bureau of the Budget, the NESDB and the Bank of Thailand to consider the "ceiling" of the expenditure budget after taking into account expected revenues and domestic borrowings. After this meeting, the Bureau of the Budget will submit this ceiling to the Cabinet for approval and then notify each ministry the limit up to which each can propose its budget request.

Once the limit is known, the smallest unit in a government department will prepare its budget request, then send it up through

section, division, department, and finally to the Office of Under-Secretary of the Ministry concerned. When the Bureau of the Budget has received all budget requests in detail from each ministry, it will decide whether they exceed the allotted ceilings, and then rank the priority of each budget item. In principle, at this stage, the Bureau of the Budget must be working closely with the NESDB to see that the priority ranking of budget items is in concert with the National Economic and Social Development Plan; but in practice, the Bureau of the Budget is acting alone. When the Bureau finishes its screening, the draft budget is submitted to the Cabinet for approval and then sent to the Parliament to be enacted into law.

In the Parliament, after the Budget Bill passes its first reading, the Parliamentary Budgetary Committee can cut or change some items, but cannot increase the budget ceilings. After the final (third) reading is passed or when the budget is approved, various government units which have been appropriated with money can submit plans to the Bureau of the Budget to withdraw funds in installments. Once this is approved, the units concerned can file petitions with the Department of Comptroller-General to get the release of funds. When these funds have been spent, all records of the spending must be sent to the Department of Comptroller-General, ready to be inspected at any time by the National Audit Council. At this point, the budget cycle ends. Chart 1 below summarises the budget cycle in Thailand as explained above (7, p. 129).

Chart 1: Budget Cycle of Thailand



Source: Adapted from Sukumalachart [59]

The functional classifications of several (expenditure) budgets are shown in Table 5. Consider the 1972 budget which will be selected as the reference budget in this study, the total public expenditures amounted to 28,140.7 million baht, of which expenditures

Table 5: Public Expenditures of Central Government: 1972, 1974, and 1976

(million baht)

	1972		1974		1976	
	Amount	%	Amount	%	Amount	%
1. Economic Service	5435.4	19.3	6127.0	17.5	10524.0	19.4
1.1 Agriculture	2242.3	8.0	2502.0	7.1	4555.0	8.4
1.2 Power & fuel	63.7	0.2	26.0	0.1	41.0	0.1
1.3 Industries	113.0	0.4	151.0	0.4	245.0	0.5
1.4 Transportation	2799.6	10.0	3276.0	9.3	5425.0	10.0
1.5 Other economic services	216.8	0.8	172.0	0.5	258.0	0.5
2. Educational Service	5317.3	18.9	7588.0	21.6	11775.0	21.8
2.1 Primary	2973.7	10.6	-	-	-	-
2.2 Secondary & Vocational	1064.9	3.8	-	-	-	-
2.3 Higher	764.7	2.7	-	-	-	-
2.4 Other	514.0	1.8	-	-	-	-
3. Health and Social Welfare	2509.8	8.9	2951.0	8.4	3980.0	7.4
4. General Services	11560.5	41.1	15067.0	43.0	24019.0	44.4
4.1 Defence	5545.2	19.7	-	-	-	-
4.2 Law Enforcement	1985.9	7.1	-	-	-	-
4.3 General Government	3737.7	13.3	-	-	-	-
4.4 Other	291.7	1.0	-	-	-	-
5. Public Debt Repayment	3317.7	11.8	3344.0	9.5	3830.0	7.1
Total Public Expenditures	28140.7	100.0	35077.0	100.0	54128.0	100.0

Source: Department of Comptroller-General

on defence, law enforcement, and general government took the lion's share of 11,560.5 million baht or 41.1%. Expenditures on economic services which include agriculture, power and industry, transportation and communication totalled 5,435.4 million baht or 19.3%. Educational expenditures at all levels were 5,317.3 million baht or 18.9%, whereas health and social welfare expenditures were only 2,509.8 million baht or 8.9% which were still smaller than interest payments on public debts for that year which amounted to 3,317.7 million baht or 11.8%.

Like public revenues, the proportional shares of functional categories have not changed much throughout the years. There is, however, a distinct proportionate increase in defence spending at the expense of economic spending during the regimes which came to power by coup d'etat as compared to the regimes that were popularly elected (Krongkaew [32]). The proportion of spending on health and social welfare services in Thailand still remains one of the lowest among developing countries, but this has increased slightly in recent year. A true shift in equity-based policies will eventually be reflected in these proportional shares between defence, economic, educational, social welfare and other spending.

Finally, it should be noted here that the shares of central government revenues and expenditures in gross domestic product of Thailand are still quite small. The share of total revenues to GDP

in the last 10 years ranges between 10-12%, whereas the share of total expenditures to GDP ranges between 18-20%, in contrast to around 35.40% in both revenues and expenditures in many developed countries in Europe and North America. It is possible, then, to see the role of public sector in Thailand expand a little more in the future with improved fiscal capability.

IV. INCIDENCE OF TAXES

The detailed methods of computing the incidence or distributive impact of taxes (and public expenditures) are given in Annex I of this study. It is sufficient for the purpose of immediate analysis of final results, to list two major steps involved in the estimation of tax incidence: (1) the designation of the final bearer of the burden, and (2) the allocation of the burden to households in different income classes. In other words, we are trying to answer two questions: Who bears the burden of the tax? And by how much? The first question deals with what is known in public finance as burden shifting assumption; and the second question involves distributive rules or bases for burden allocation (8, p. 129).

Burden Shifting Assumptions of Public Revenues

The assumption on how the burden of a tax is shifted is very important in the estimation of the distributive impact of overall public revenue system because in some cases the distributive impact could change by the use of different assumptions. The assumptions adopted in this study have been made with extreme caution, taking into account the significance of the above-mentioned sensitivity. For each tax or major group of taxes and other public revenues, the burden shifting assumptions are as follows:

(1) Individual income tax Income-tax payers or income earners are assumed to bear the entire burden.

(2) Corporate income tax Even in theory, there is no definite conclusion on whom the burden of this tax should fall, the stock holders or consumers. And the results from various empirical studies range from no shifting of the burden at all, that is the burden falls with the corporate owners, to more than 100% forward shifting, that is the consumers of the firms' products bear more than the full amount of the tax. In this study, it is assumed that firms in Thailand do not aim at profit maximization by means of equating their marginal revenues with marginal costs, but by means of sales maximization after planned profits have been marked up upon the average costs. In other words, full-cost pricing is assumed here. Therefore, corporate income tax will be included in the prices of the firm's products, thus the entire burden is shifted onto the consumers just like any other indirect taxes.

(3) Business tax, excise tax, commodity tax, import tax These are indirect taxes where the burden is assumed to be shifted entirely forward to consumers according to their patterns of consumption of the taxed products, that is to say the more the consumption, the higher the burden.

(4) Export tax and rice premium On the prior assumption that foreign demand for Thai agricultural exports particularly Thai rice is very elastic, the burden of these taxes is assumed to shift backward in its entirely to the local producers or farmers.

(5) Taxes on property The burden is assumed to fall on property owners except in certain cases where evidence of forward shifting is clear. For example, taxes on trucks or buses would be assumed to fall on those who use truck or bus services.

(6) Royalties and fees The leasers or those who received specific services from the government will bear the burden of these revenues.

(7) Proceeds or profits from government's sales of goods and services, monopolies, or public enterprises These are treated as a form of indirect tax, thus their burden falls on consumers of those goods or services.

(8) Other revenues Each item is considered individually as to its possible bearer of the burden. For example, the burden of liquor fines would fall on liquor consumers, and so on.

Bases for Burden Allocation

Once the direction of the Burden is known, the next step is to find some ways to measure the different burdens borne by different households. In empirical estimation, it is assumed that there are some rules or bases upon which such burdens are allocated to various households. Allocation bases for some revenue items are discussed below as an example of how the incidence estimates were made possible.

- Individual income tax Data from the Department of Revenue show the amount of tax paid by taxable income classes. Therefore, by computing the taxable income bases from money income bases (that is after personal and other deductions are subtracted from money income subject to tax, what remains is the taxable income base), it is possible to estimate the burden of individual income tax by money income classes.

- Corporate income tax The Department of Revenue classifies the tax collected according to the types of business activities such as food and beverages, manufacturing, construction, transportation, services, and so on. If the relative patterns of consumption of these goods and services on the part of the households are known, then they can be used as bases for allocation of the tax burden. Report of Socio-economic Survey, B.E. 2514 - 2516 by the NSO provides for such patterns.

- Business tax, excise tax, commodity tax, and import duty The taxes are also classified by types of business activities. So the same patterns of household consumption expenditures as above provide the bases for burden allocation. In certain cases, these consumption pattern bases are supplemented by such other bases as household distribution, income distribution, and so on. Some taxes may be allocated upon the combination of many bases. For example, the burden of taxes on petroleum products is allocated both upon

the patterns of expenditures on travel, on distribution of personal income (to determine car ownership), and on the patterns of uses of petroleum products in production process to decide which finished product uses how much fuel or oil. In this later case, input-output table is required (9, p. 129).

- Export tax and rice premium Since the subsidization effects of rice premium are not taken into account in this study, the burden of export tax and rice premium is allocated to farmers according to the size of their production. The distribution of rural income is used as a proxy in allocating such burden.

Other taxes are considered individually for their allocation bases, the details of which are not presented here. However, the account of how the burden is allocated given above, should be sufficient for the description of methodology.

Empirical Results

The empirical estimates of the distributive impact of Thai public revenue system in 1972 will be presented in four different ways, namely (1) incidence of taxes by region; (2) incidence of taxes by income class; (3) the effective tax rates; and (4) the change in household income distribution after tax and other public revenues.

(1) Incidence of taxes by region

These estimates of the incidence of taxes by region are obtained in the process of arriving at the incidence by income class. They are not central in this study, but may be useful in the understanding of incidence pattern by average household in each region of Thailand. So, they are included here.

Table 6 shows the regional incidence of Taxes in the form of percentage share of burden across five regions. It can be seen that the highest percentage of individual income tax revenues was collected from Bangkok region, that is about 3/4 of total revenues from this tax. As for corporate profit tax, it might appear that the proportion of tax collected from Bangkok should be higher than 23.8%, but this share is reasonable considering the fact that its burden was assumed to be shifted out to whomever consumes products of the taxed companies. The same reason explains the share of business tax, excise tax, and import duty. For average tax burden as a whole for average family, families in Bangkok still bear the highest burden, whereas those in the Northeast the smallest. But then this is the absolute burden, and it does not reflect the effective burden or the ability-to-pay of average families in each region, which will be discussed later.

(2) Incidence of taxes by income class

The typical end-results of tax incidence study are shown in Table 7 for the incidence of taxes in Thailand in 1972. It shows

Table 6: Regional Share of Absolute Tax Burden by Type of Taxes, 1972

(percent)

Type of Tax	Whole Kingdom	North-east	Bangkok	North	Center	South
1) Individual Income Tax	100.0	5.6	74.4	5.3	9.8	4.9
2) Corporate Income Tax	100.0	17.4	27.8	17.7	24.7	16.3
3) Business Tax	100.0	16.9	31.7	15.8	24.5	11.1
4) Specific Sales Tax	100.0	15.2	38.8	13.1	24.1	8.8
5) Import Duty	100.0	17.1	29.2	16.7	25.7	11.3
6) Rice Premium	100.0	34.7	0.6	26.2	30.8	7.7
7) Other Export Tax	100.0	32.5	2.0	24.0	28.3	13.3
8) Taxes on Property	100.0	10.3	52.8	8.0	21.2	7.7
9) Royalties & Fees	100.0	10.1	14.8	10.8	13.4	50.9
10) Government Sales	100.0	14.6	39.7	16.0	19.7	10.1
11) Government Monopolies	100.0	21.4	21.4	18.2	27.5	11.5
12) Government Enterprises	100.0	20.1	18.7	20.0	28.0	13.2
13) Others	100.0	27.0	15.2	21.0	23.1	12.7
14) Total	100.0	16.5	32.9	15.2	23.3	12.2

Table 7: Incidence of Taxes by Income Class, 1972

(million baht)

Type of Tax	Income Class								
	Under 3000	3000-5999	6000-8999	9000-11999	12000-14999	15000-17999	18000-29999	3000 & over	All Classes
1) Individual Income Tax	-	-	-	-	17.6	42.1	256.7	1241.5	1555.9
2) Corporate Income Tax	87.7	119.7	99.6	90.5	72.6	56.1	168.4	299.5	994.1
3) Specific Sales Tax	310.9	396.0	316.4	287.4	310.2	177.7	625.7	1107.4	3531.7
4) Business Tax	389.4	486.0	395.4	349.3	315.1	214.7	721.1	1575.9	4446.9
5) Import Duty	502.0	643.9	540.4	504.3	425.1	320.5	987.7	1717.5	5641.4
6) Rice Premium	12.2	24.4	20.7	16.9	14.4	7.3	24.3	43.0	163.2
7) Other Export Tax	17.7	35.8	31.4	25.8	21.9	11.7	37.6	64.1	246.0
8) Taxes on Property	19.8	32.1	30.7	34.3	32.3	26.9	96.6	331.5	604.2
9) Royalties and Fees	27.1	47.6	45.3	42.7	40.6	29.6	99.9	514.8	847.6
10) Government Sales	52.6	66.9	53.0	47.2	39.6	28.4	90.3	270.8	648.8
11) Government Monopolies	85.5	113.7	90.2	75.3	81.4	51.5	170.5	198.8	866.9
12) Government Enterprises	93.7	119.3	94.8	81.0	56.6	45.1	130.9	200.1	821.5
13) Other Revenues	171.6	165.4	110.8	82.7	62.8	40.4	121.4	173.4	928.5
14) Total	1770.2	2250.8	1828.7	1637.4	1488.2	1052.0	3531.1	7738.3	21296.7
15) Percent	8.3	10.6	8.6	7.7	7.0	4.9	16.6	36.3	100.0

the absolute amounts of taxes that households in each income class bore for that year. Of 21,296.7 million baht revenues that the Government collected from resident households in 1972, 1770.2 million baht or 8.3% were supposed to come from the lowest income households (under 3000 baht group), whereas 7,738.3 million baht or 36.3% were supposed to come from the highest-income households (30000 baht and over group). One can compare those absolute tax burdens for each tax across income classes by examining the content of the table, but such comparison may be difficult because the number of households in each income class was not the same. Perhaps calculating the absolute burden by an average household could be an alternative, but this may still give a misleading sense of fairness because the average revenue burden of the lower-income class would still be quite low, and that of the higher-income class would still be quite high. A much better way to show the true distributive impact of a public revenue system is to divide the absolute tax burden of each income class by the total income of that class. The result is called the effective tax rate.

(3) Effective tax rate

Effective tax rate is the ratio of absolute burden of tax to the total (money) income of the householdswhich bear such burden. In other words, it shows the proportion of money income that each income class has contributed, directly or indirectly, as taxes, charges, or other payments to the government. Table 8 presents such effective tax rates by income class, by each major type of tax, and by total

Table 8: Effective Tax Rates, 1972

Type of Tax	Under 3000	3000-5999	6000-8999	9000-11999	12000-14999	15000-17999	18000-29999	3000 & over	All Classes
1) Individual Income Tax	-	-	-	-	0.3	1.2	1.9	4.1	2.1
2) Corporate Income Tax	3.2	2.0	1.6	1.6	1.4	1.5	1.2	1.0	1.4
3) Specific Sales Tax	11.3	6.5	5.2	5.0	5.9	4.9	4.6	3.7	4.8
4) Business Tax	14.1	8.0	6.5	6.1	5.9	5.9	5.3	5.2	6.1
5) Import Duty	18.2	10.6	8.9	8.8	8.0	8.8	7.3	5.7	7.7
6) Rice Premium	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.1	0.2
7) Other Export Tax	0.6	0.6	0.5	0.5	0.4	0.3	0.3	0.2	0.3
8) Taxes on Property	0.7	0.5	0.5	0.6	0.6	0.7	0.7	1.1	0.8
9) Royalties and Fees	1.0	0.7	0.8	0.7	0.8	0.8	0.7	1.7	1.2
10) Government Sales	1.9	1.1	0.9	0.8	0.8	0.8	0.7	0.9	0.9
11) Government Monopolies	3.1	1.9	1.5	1.3	1.5	1.4	1.3	0.7	1.2
12) Government Enterprises	3.4	2.0	1.6	1.4	1.1	1.2	1.0	0.7	1.1
13) Other Revenues	6.2	2.7	1.8	1.4	1.2	1.1	0.9	0.6	1.3
14) Total	64.1	37.2	30.1	28.4	28.1	28.7	26.1	25.8	29.1

revenue system. The average effective tax rate for the whole revenue system was estimated at 29.1%, indicating that the fiscal burden of the Government upon households in 1972 was almost 30% of their total money income.

These effective rates can also be used as an indicator of the progressivity of the tax and other revenue systems. If the effective tax rate increases as family income increases, it means that the revenue system in question is progressive. But if such rate decreases while family income increases, the system is regressive. A regressive revenue system would, in general, worsen the existing income distribution, whereas the progressive system would improve it. From Table 8, it is quite obvious that the public revenue system of Thailand in 1972 showed a tendency to be regressive because the lowest income bracket has the effective tax rate of 64.1% whereas the rate for the top income bracket was only 25.8% which was even smaller than the national average. And from the lowest-income groups to highest income groups, the effective revenue rates kept falling continuously with only one small break, that is in the income range between 15000-17999 baht per annum. However, the regressivity was very marked in only first two income classes, but then it fluctuates within a narrow range of about 26 to 30 percent indicating that the revenue burden become quite proportional to income from the third income class onward. This situation can be more clearly seen in a diagrammatic presentation shown in Figure 1.

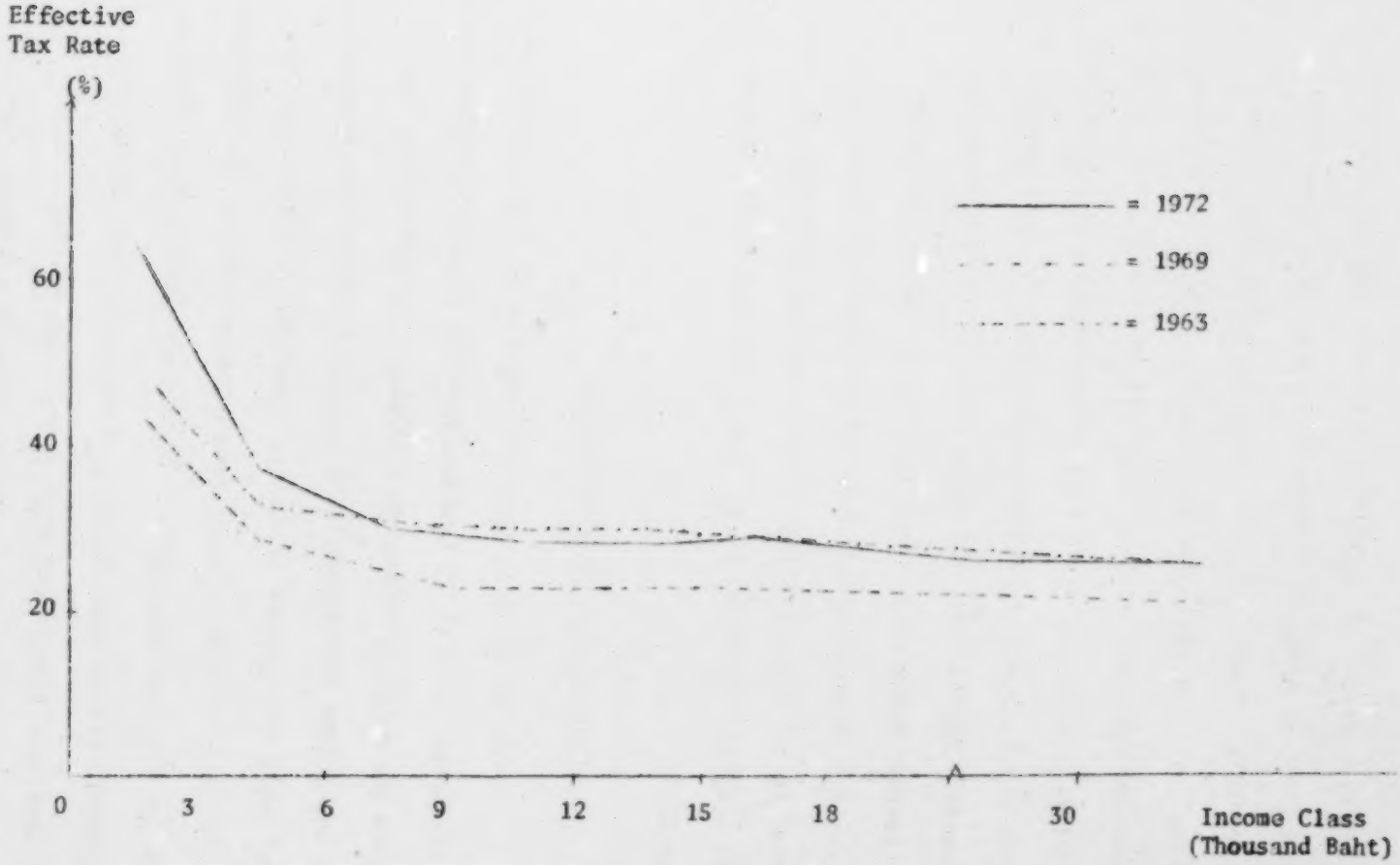


Figure 1: Effective Tax Rates: 1963, 1969, and 1972

For comparison, the effective tax rates for 1963 and 1969 taken from a previous study (Krongkaew (28)) were also shown with the rates for 1972. Generally, all curves are quite steep at the lowest income level but fall down very quickly at the second lowest income level and then more or less level off at higher income brackets. The regressivity of revenue system for 1972 seemed to be the highest of the three years because of the high tax burden of the first two income classes. Beyond this, the trend appeared to be similar for the three periods under study. So, the public revenue system of Thailand could be characterized as slightly regressive to income proportional in all three periods: 1963, 1969 and 1972, but the regressivity slightly increased in 1972 when compared to the two previous periods.

(4) Post-tax income distribution

One of the most important aspects of a tax and other revenue incidence study is to find out how such a public revenue system has altered the existing income distribution. By subtracting the absolute tax burden from appropriate household income, one obtains the so-called "post-tax" income. Relative positions of these post-tax incomes across all income classes give a new picture of the distribution of income of the same households. If this new distribution shows an improvement in income equality (more equaling or less inequality), then tax policies that caused such change were desirable ones. The post-tax income distribution by income class for 1972 in shown in

Table 9 together with the corresponding post-revenue distributions for 1963 and 1969 taken from previous study. Table 10 also shows post-tax distributions for some three periods, but by quintile group.

Table 9: Post-tax Income Distribution by Income Class: 1963, 1969 and 1972

(Percentages)

Income Class (baht)	1963		1969		1972	
	Pre-tax	Post-tax	Pre-tax	Post-tax	Pre-tax	Post-tax
Under - 3000	13.0	10.0	3.7	2.8	3.8	1.9
3000 - 5999	14.0	13.5	9.3	8.7	8.3	7.3
6000 - 8999	26.4	27.3	10.6	10.3	8.3	8.2
9000 - 11999			9.2	9.1	7.9	8.0
12000 - 14999	13.1	13.5	8.1	7.9	7.2	7.3
15000 - 17999			6.8	6.8	5.0	5.0
18000 - 29999	35.5	35.7	52.3	54.4	18.5	19.3
30000 and over					41.0	43.0
All Classes	100.0	100.0	100.0	100.0	100.0	100.0

Source: Krongkaew (29)

Concentrate on the result of the year 1972 in Table 9 first. The income share of the lowest income group decreased from 3.8% before tax to only 1.9% after tax. At the same time, the same income shares of the two richest income groups had their shares increase from 18.5% and

Table 10: Post-tax Income Distribution by Quintile Group: 1963, 1969 and 1972

(Percentages)

Quintiles	1963		1969		1972	
	Pre-tax	Post-tax	Pre-tax	Post-tax	Pre-tax	Post-tax
Lowest 20%	2.9	1.5	3.4	2.4	2.4	0.8
Second 20%	6.2	5.1	6.1	5.6	5.1	4.4
Third 20%	10.5	10.1	10.4	10.4	9.7	9.3
Fourth 20%	20.9	19.3	19.2	19.3	18.4	18.3
Top 20%	59.5	64.0	60.9	62.3	64.4	67.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Within top 20%						
Top 10%	42.2	46.5	43.9	44.9	47.5	50.0
Top 5%	28.4	32.4	31.1	31.0	35.5	35.9
Top 1%	9.6	12.3	10.5	11.5	15.0	14.9

Source: Krongkaew (29)

41.0% to 19.3% and 43.0%, respectively. The nature of change of post-tax income distributions for 1963 and 1969 was essentially the same as that in 1972, that is the relative income positions of lower income classes worsened while those of higher income classes improved. It can be concluded, therefore, that the burden of taxes and other public revenues had caused the distribution of household income to become more

unequal in every period under study. The only major difference was that tax policies of one period might be more income disequalizing than the other.

Table 10 perhaps provides a better base for comparison. In every period, families in the first (poorest) 40% suffered a decline in their relative income positions as a result of government taxes and revenues, whereas families in the top (richest) 20% enjoyed an increase in relative income shares in every period except 1963. There was very little change in the post-tax income distribution of the third and fourth 20% groups. If these groups could be called middle-income groups, then the tax system of Thailand had succeeded in redistributing income from the poor families to the rich families -- a kind of "pro-rich" rather than "pro-poor" tax and revenue system.

When the pre-tax and post-tax Gini coefficients were estimated from data in Table 9, the results (shown in Table 11) confirm the conclusion made above that, as a result of the tax, the distribution of income of Thai households became more unequal. The rate of increase

Table 11: Gini Coefficients of Pre-tax and Post-tax Income Distributions, 1963, 1969, and 1972

	Gini Coefficients		
	1963	1969	1972
Pre-tax income distribution	0.5627	0.5550	0.6051
Post-tax income distribution	0.6102	0.5847	0.6476

Source: Krongkaew (32).

of income inequality was 8.4%, 5.4%, and 7.0% for 1963, 1969 and 1972, respectively (measured from the change in the size of Gini Coefficient). Of the three years under study, the tax system in 1969 was least income disequalizing, but unfortunately the most recent system (1972 system) had aggravated the inequality problem.

Policy Recommendations

That tax system of Thailand is somewhat regressive and thus income disequalizing is not very surprising considering the fact that very large percentages of tax revenues were collected from indirect taxes such as specific sales tax, business tax, and import duty. Tax reform is usually a succinct term that most economists would use to recommend policy changes. In Thailand, the specific detail of tax reform for distributive purpose (as well as for efficiency purpose) will need careful studies, but, in general, the following types of tax and other revenue reforms could be suggested.

(1) Indirect taxes are regressive mainly because they are based on consumption, the expenditures on which form a large proportion of income of lower-income households. As long as the Government still has to depend on indirect taxes as its major sources of revenue, the chance of improving existing income distribution by tax policies is rather slim. The Government must attempt to put less emphasis upon indirect taxes is sources of revenue. The use of indirect tax as a mean to discourage certain consumption can still be practised as long as such

consumption is highly income elastic (ie. luxury goods), but not as a pretext to extract further revenue from lower-income consumers whose demand for the taxed consumption is highly price inelastic. Occasionally, the use of tax variations may be recommended for some purposes which may, unknowingly, have an adverse distributive effect. For example, in a move toward a uniform and lower level of effective protection for all industry by reducing protection of those industries where effective protection is higher than average, excise or business taxes are recommended to be used to reduce protection while maintaining tariffs at the present level. From distributive point of view, this is equivalent to increasing the regressivity of the tax system and would further aggravate income inequality. Certainly there must be other ways that protection can be reduced without putting a double jeopardy on the already serious income disparities.

(2) Another way of reducing the emphasis on indirect taxes is to change the way the tax is collected. Under the present system, many taxes that have been levied on a single product tend to have a pyramiding effect on the final selling price of such product, that is to say, the consumer will have to bear relatively higher burden than if a single tax is levied or collected at one stage. However, there is a multi-stage tax that does not create pyramiding effect. This tax is the value-added tax. It holds a high potential for possible replacement of many indirect taxes collected in Thailand at present.

(3) As the emphasis on indirect taxes will be progressively reduced, the Government will have to turn to other sources of revenue in order to maintain the level of funds necessary for public spending. Individual income tax is of course the most likely candidate. A general reform should be in the areas of improved tax administration, increased checks on tax evasion, wider definition of income, less preferential treatments of certain incomes such as income from professional activities. The present income tax rates seem reasonable on the whole, but the rate for the lower income bracket, expecially the second bracket with taxable income of over 10,000 baht to 50,000 baht, should be scaled down or if not basic deduction should increase. The recent increase in personal deduction from 20% of gross income to 30% but not exceeding 20,000 baht was an improvement in the same direction.

(4) Because corporate income is treated as indirect tax here, the problem of double taxation of profit and dividend does not arise. The recent change of the rate of corporate income tax from multi-rate to single-rate was commendable in simplifying tax management. Corporate dividend is of course to be treated as ordinary income of stockholders.

(5) Without serious attempts to levy taxes on wealth and property in Thailand, there is no hope of reducing income inequality quickly or sufficiently because wealth is the source of income. The Government must initiate inheritance or death tax as well as property and capital gains tax. Recently the Departments of Revenue and Local Governments are trying to reorganize land development tax and house and

land tax into a proper property tax. If successfully implemented, it should have great impact on attaching present income inequality. But the possibility of the use of inheritance tax in the near future is not very bright due to political resistance. The failure of recent capital-gain tax experiment was also regretable, but it should be reintroduced again after careful studies on its administration.

(6) The rice premium and rice export tax are singularly burdensome to farmers. The concept of using rice premium to stabilize domestic price of rice is reasonable, but a larger farm-price stabilizing program is a much better policy. There is no doubt that abolishing rice premium completely will raise the retail prices of rice and other crops, but this could be done a small step at a time, and subsidy system could be used to help low-income urban families.

(7) Government's revenues from many public activities or operations such as state lottery, distilleries, and tobacco monopoly are burdensome to low-income households. Instead of trying to earn more income and profit from these activities by increasing taxes and excises, the Government should dissuade the people from the consumption of these products.

V. INCIDENCE OF PUBLIC EXPENDITURES

In order to assess the distributive impact of a public expenditure, the same two important questions will be asked in the same way as in tax incidence study discussed in the last chapter. These two questions are (1) who should be the real beneficiaries of a public expenditure program or project?, and (2) how should benefits from public expenditure be allocated to households in various income classes? Once these two questions are answered, the assessment of incidence of public expenditures becomes very simple.

Benefit Shifting Assumptions of Public Expenditures

As the first person who pays the tax is not necessarily the one who bears the final burden of that tax, the first person who receives the payment from a public expenditure project is also not necessarily the one who receives final or real benefit from that spending. A public school teacher who received a salary from the government is a good case in point: he or she should not be the final or real beneficiary of public educational spending; the true beneficiary should be the students themselves or their parents. This point is discussed in more detail in Annex I. Here we shall give a few examples as to how the beneficiary issue is decided.

- Expenditures on economic services Many areas are covered in this type of spending. As for agriculture, the direct beneficiaries are farmers and others who deal directly with farmers such as middlemen

and transportation operators. For spending on highways and other road services, the beneficiaries should include automobile owners, persons who use public transport services, and those who, because of such public spending on roads are able to acquire goods and services more quickly and cheaply.

- Expenditures on education. As we have mentioned earlier, educational beneficiaries are students who enrolled in public educational institutions. If these students are dependent on parents or guardians, those parents or guardians would receive the benefits on the students' behalf.

- Expenditures on health and social welfare. Patients who receive medical services from public hospitals or clinics will be beneficiaries of health expenditures. Social welfare expenditures would directly benefit those who receive them or directly affected by them.

- Expenditures on general services. One of the largest items here is defence spending the benefits of which should accrue to all residents, theoretically speaking. So, should benefits from law enforcement and general government expenditures. This point will be reconsidered again later.

- Expenditures on debt payment. The benefits from these expenditures can be treated in many different ways, but in this study, they are treated as direct transfers which is consistent with national income accounting method.

Bases for Benefit Allocation

A well-known fact in fiscal incidence study is that the conceptual problem of measuring the benefits of public expenditures by individuals or households is almost impossible to solve satisfactorily. We are dealing now with the question of, not who should benefit from a certain spending, but how much is received? To attempt to answer that question, economists reverse the steps and now ask the question : how much benefits should be allocated to each individual or income class? Many of the bases for benefit allocation to be discussed presently are arrived at arbitrarily, but with great care being paid to the plausibility of such bases or rules supported by whatever available evidence that the author could find (10, p. 129). Examples are:

(1) Agricultural expenditures

Expenditures of Ministry of Agriculture and Cooperatives, except a part of the Royal Irrigation Department, were assumed to benefit rural households, and one-half of these benefits were allocated to rural households according to the distribution of all rural households by income class, and the other one-half by the distribution of rural income. For the benefits from the Royal Irrigation Department, the water services should benefit farmers in direct proportion of their farm holdings, and within a very short-run, those middlemen, transport operators, millers, and exporters who deal directly with farmers also receive some benefits along with them. From several marketing channel or product distribution studies it was found that the share of profits

by farmers and non-farmers was about 70% to 30%. Therefore, 70% of irrigation spending were allocated to rural households according the distribution of rural income, and the other 30% allocated to urban households according to the distribution of urban income.

(2) Expenditures on highway construction

Three types of benefits were distinguished: benefits to private car owners, to public transport users, and to consumers of road-transported commodities. The allocation of benefit was based upon the actual percentage share of private cars to total number of cars, the pattern of households' transportation expenses, and the types of commodities that were transported by road to consumers.

(3) Educational expenditures

As primary education is compulsory, every household should all receive equal benefits from public spending on primary education. But for secondary education, the income positions of families have great influence upon the decision to see their children finish high schools. So benefits from secondary expenditures were allocated according to the distribution of income of the whole kingdom. For higher education, actual statistics exist as to the income classes of university students, in which case the distribution of benefits was straightforward and unambiguous.

(4) Health expenditures

It is possible to impute the costs of medical services given to patients from different income classes from the point of view of the donor (that is the government) and designate those costs as benefits received by the recipients, but this is a major research work requiring tremendous efforts. In this study, a much simpler assumption was made that the health benefits accrued to households according to the share of each income class of its reciprocal of income to total reciprocals of income. What this meant was that the poorer the household, the relatively more benefits it would receive from expenditures on health services (11, p. 129).

(5) Defence spending

As a public good, it is theoretically impossible to measure the benefit received from defence services by each individual because true preference is not revealed. Two equally plausible ways to escape this impasse would be to assume that everyone in the country receives perfectly equal share of the defence expenditures, or that the share of benefits should not be equal but varies according the "stakes" that each one may have to lose in the event of war. The concept of individual stake is attractive as wealth or income could be substituted for that stake; it means that the richer one is, the more he would appreciate the benefits of national protection. As such, this latter assumption was adopted in this study and defence spending was allocated according to the distribution of household income.

(6) Expenditures on general government

As the concept of stake does not apply here, the benefits from these expenditures were assumed to be allocated according to the distribution of households for the whole kingdom.

Empirical Results

The results of public expenditure incidence will be discussed in four parts: (1) the incidence of public expenditures by region, (2) the incidence of public expenditures by income class, (3) the effective benefit rates, and (4) the change in the income distribution after the impact of public expenditures.

(1) Incidence of public expenditures by region

Like its counterpart on the tax side, the results of public expenditure incidence were known first before the incidence by income class was known. It was shown here in Table 12 without much explanation, to give the reader the idea how public expenditures were shared among regions in 1972.

Table 12 points out that the benefits from economic expenditures accrued to the Northeast more than any other regions (38.9% of total expenditures) which the South received the smallest share (5.2%). Overall, the Southseemed to be the region most neglected by the government. As expected the Central region received highest benefits in terms of irrigation expenditures (35.7%). The South received 13.4%

Table 12: Regional Share of Absolute Benefits by Type of Expenditures, 1972

Type of Expenditure	Whole Kingdom	North-east	Bangkok	North	Center	South
1. Economic Services	100.0	38.9	9.5	18.8	35.7	5.2
1.1 **Agriculture**	100.0	16.0	0.2	15.7	60.4	7.6
1.2 **Power & Fuel**	100.0	4.9	67.8	5.3	17.9	4.1
1.3 **Industries**	100.0	6.8	39.2	5.8	42.6	5.6
1.4 **Transportation**	100.0	44.4	13.9	21.9	17.1	2.7
1.5 Other Economics	100.0	29.3	15.0	20.3	23.1	12.2
2. Educational Services	100.0	18.6	28.3	18.2	21.4	13.4
2.1 Primary	100.0	20.1	26.5	18.0	21.9	13.5
2.2 Secondary	100.0	18.6	25.8	15.9	26.7	13.0
2.3 High	100.0	8.0	50.0	20.0	10.0	12.0
2.4 Other	100.0	25.3	12.2	21.7	24.7	16.1
3. Health & Welfare Services	100.0	25.6	22.6	19.1	21.6	11.2
4. General Services	100.0	18.0	27.4	17.0	26.4	11.3
4.1 Defence	100.0	16.7	22.7	19.6	28.7	12.3
4.2 Law Enforcement	100.0	21.1	23.0	16.2	27.5	12.2
4.3 General Government	100.0	17.1	38.1	13.1	22.6	9.1
4.4 Other	100.0	33.5	8.6	23.0	21.8	13.1
5. Public Debt Repayment	100.0	10.0	58.2	7.9	14.5	9.4
Total Expenditures	100.0	20.3	27.3	16.7	25.4	10.3

benefits in educational expenditures compared with 18.6% in the Northeast. The majority of educational benefits accrued to Bangkok region, and to a lesser extent the Central region. For benefits from higher education alone, Bangkok reaped about half of the total higher education expenditures. Altogether, Bangkok region which was the smallest region in terms of number of households still received the highest share of benefits of total public expenditures in 1972 (27.3%).

(2) Incidence of public expenditures by income class.

Table 13 presents the absolute benefits of all types of public expenditures in income class in 1972. These were supposed to be equivalent to income that would be added to the money income of households in each income bracket. In this present form, not much analysis could be made out of Table 13, except perhaps to note that, of the amount of 28,140.7 million baht total public expenditures, 2,582.9 million baht or 9.2% were allocated to the lowest income bracket, and 10,361.8 million baht or 36.8% to the highest income bracket. If should be noted also that the health benefits imputed for the lowest income bracket might be somewhat high; this was due to a conscious bias to let this income group share more of public health expenditures. Furthermore, the very high amount of general service benefits must be examined with caution because they were the types of benefits which were less tangible than most other types of benefits. Some researchers even left them out of consideration all together.

Table 13: Incidence of Public Expenditures by Income Class, 1972

Type of Expenditure	Income Class								
	Under 3000	3000-5999	6000-8999	9000-11999	12000-14999	15000-17999	18000-29999	30000 and over	All Classes
1) Economic Services	461.1	611.7	491.0	451.3	397.1	237.8	817.4	1968.0	5435.4
1.1 Agriculture	135.4	234.6	216.5	205.2	179.4	114.4	407.4	749.4	2243.3
1.2 Power and Fuel	0.8	2.0	2.5	3.2	3.6	3.1	13.1	35.4	63.7
1.3 Industries	7.6	10.6	9.7	10.0	8.9	6.5	22.4	37.3	113.0
1.4 Transportation	297.3	336.5	239.2	213.5	188.3	103.2	338.3	1083.3	2799.6
1.5 Other Economic	20.0	28.0	23.1	19.4	16.9	10.6	36.2	62.6	216.8
2) Educational Services	479.2	576.6	484.9	416.1	365.8	255.1	914.0	1825.6	5317.3
2.1 Primary	359.2	401.7	308.7	258.1	219.3	146.8	482.0	798.0	2973.7
2.2 Secondary	40.3	87.4	86.9	82.8	77.5	52.9	197.2	439.9	1064.9
2.3 Higher	2.3	3.8	28.3	28.3	31.3	32.1	162.1	476.4	764.9
2.4 Other	77.4	83.7	61.0	46.9	37.7	23.3	72.7	111.3	514.0
3) Health & Welfare Services	574.1	168.5	227.7	286.3	249.5	279.8	336.7	387.2	2509.8
4) General Services	1034.2	1313.8	1095.2	978.6	862.1	588.3	2019.8	3668.5	11560.5
4.1 Defence	209.5	459.1	460.9	437.2	402.0	276.9	1024.2	2275.4	5545.2
4.2 Law Enforcement	265.1	288.9	215.7	178.7	149.1	97.1	312.8	478.5	1985.9
4.3 General Government	559.6	565.8	418.6	362.7	311.0	214.3	682.8	914.6	1029.4
5) Public Debt Repayment	34.3	77.7	86.4	95.3	100.3	81.1	330.0	2512.5	3317.7
Total Expenditures	2582.9	2748.3	2385.2	2227.6	1974.8	1442.1	4417.9	10361.8	23140.7
Percent	9.2	9.8	8.5	7.9	7.0	5.1	15.7	36.8	100.0

(3) Effective benefit rate

Dividing the absolute benefit figures in Table 13 by corresponding money income of each income class would result in "effective benefit rates" which are better indicators of how each income class shared the benefits from public expenditures. Table 14 which presents these effective rates by all types of expenditures and by income class, tells us that the gain to income of average household as a result of public spending was about 38.4% of total money income. But the distribution of this gain was quite concentrated around the first two income classes more than the rest. The lowest income class itself was alloted almost its money income (93.5%) in public expenditure benefits, and only slightly less than half of money income (45.4%) for the second lowest income bracket. The effective benefit rates for health and general government expenditures might be artificially high for the lowest income class (20.8% and 20.3%, respectively). This confirms the suspicion that was expressed earlier that it could distort the true incidence in this class. For the income position of this class to be improved by health services was not entirely unreasonable, but one must question the idea that such income position could be so, improved by increasing the size of government's bureaucracy. What it meant here was that the very low income level of the lowest income group might make the total effective benefit rate for this class appeared extremely large. One needs to downgrade such rate a little to make any real sense. Nonetheless, the fact still remains that the lowest income class received the highest effective benefits among all other income classes.

Table 14: Effective Benefit Rates, 1972

Type of Expenditure	Under 3000	3000-5999	6000-8999	9000-11999	12000-14999	15000-17999	18000-29999	30000 and over	All Classes
1) Economic Services	16.7	10.1	8.1	7.8	7.5	6.5	6.0	6.6	7.4
1.1 Agriculture	4.9	3.9	3.6	3.6	3.4	3.1	3.0	2.5	3.1
1.2 Power and Fuel	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
1.3 Industries	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2
1.4 Transportation	10.8	5.6	3.9	3.7	3.6	3.8	2.5	3.6	3.8
1.5 Other Economic	0.7	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.3
2) Educational Services	17.3	9.5	8.0	7.2	6.9	7.0	6.8	6.1	7.3
2.1 Primary	13.0	6.6	5.1	4.5	4.1	4.0	3.6	3.7	4.1
2.2 Secondary	1.5	1.4	1.4	1.4	1.5	1.4	1.5	1.5	1.5
2.3 Higher	0.1	0.6	0.5	0.5	0.6	0.9	1.2	1.6	1.0
2.4 Other	2.8	1.4	1.0	0.8	0.7	0.6	0.5	0.4	0.7
3) Health & Welfare Services	20.8	2.8	3.8	5.0	4.7	7.6	2.5	1.3	3.4
4) General Services	37.4	21.7	18.0	17.0	16.3	16.1	15.0	12.2	15.8
4.1 Defence	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
4.2 Law Enforcement	9.6	4.8	3.6	3.1	2.8	2.7	2.3	1.6	2.7
4.3 General Government	20.3	9.4	6.9	6.3	5.9	5.9	5.1	3.0	5.5
5) Public Debt Repayment	1.2	1.3	1.4	1.7	1.9	2.2	2.4	8.4	4.5
Total Expenditures	93.5	45.4	39.3	38.7	37.3	39.4	32.7	34.5	38.4

Figure 2 illustrates the total effective benefit rates for 1972 in comparison to similar effective benefit rates for 1963 and 1969. They all seemed to have the same incidence pattern, that is regressive or pro-poor in the lower income classes but then fairly proportional to income in the rest of income classes. This regressive to proportional incidence pattern more or less resembles the tax incidence pattern. Therefore, the situations regarding public expenditures would tend to improve income distribution while the situations regarding public revenues had a tendency to worsen it as was mentioned before. Without waiting to see the net result in the final section, one could speculate with the information at hand that the net benefit would be quite small.

(4) Post-benefit income distribution

If the benefits from government expenditures accrued to lower-income groups relatively more than to higher-income groups, the effect of tax being constant, the post-benefit income distribution must improve. This is true for the situation in Thailand in 1972. The post-benefit income distribution could be estimated simply by adding the absolute benefits to corresponding household incomes and recomputing the new distribution. By the same method that was used to calculate post - tax income distribution by quintile group, post-benefit income distribution by quintile group was also calculated. The results of both these distributions by income class and by quintile group are shown in Tables 15 and 16.

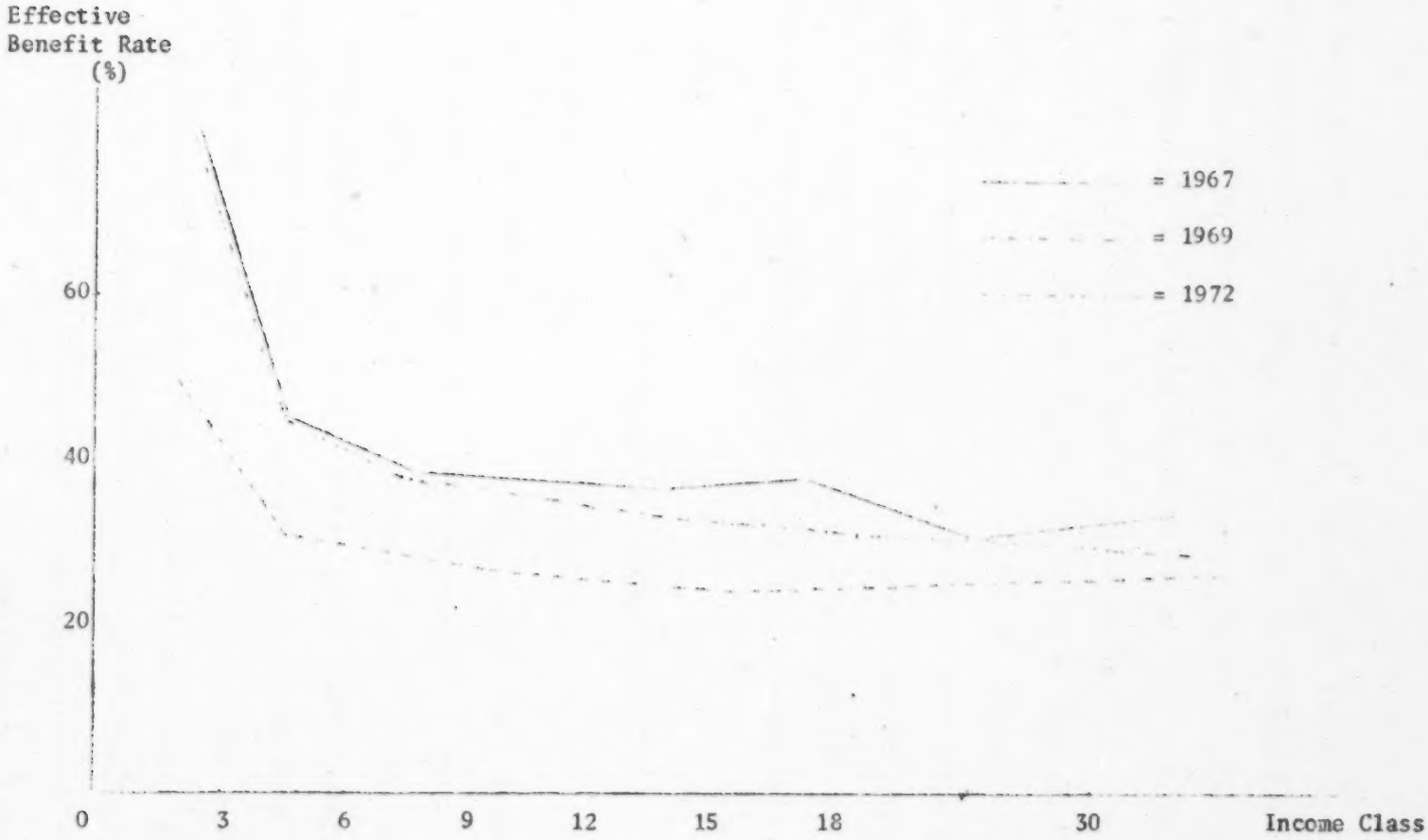


Figure 2: Effective Benefit Rates: 1963, 1969, and 1972.

Table 15: Post-benefit Income Distribution by Income Class, 1963, 1969 and 1972

(Percentages)

Income Class (baht)	1963		1969		1972	
	Pre-benefit	Post-benefit	Pre-benefit	Post-benefit	Pre-benefit	Post-benefit
Under - 3000	13.0	14.9	3.7	5.2	3.8	5.3
3000 - 5999	14.0	14.1	9.3	10.0	8.3	8.7
6000 - 8999	26.4	25.8	10.6	10.9	8.3	8.3
9000 - 11999			9.2	9.3	7.9	7.9
12000 - 14999	13.1	12.5	8.1	8.0	7.2	7.2
15000 - 17999			6.8	6.6	5.0	5.0
18000 - 29999	33.5	32.7	52.3	50.0	18.5	17.7
30000 and over					41.0	39.9
All Class	100.0	100.0	100.0	100.0	100.0	100.0

Source: Krongkaew (29)

Both Tables 15 and 16 show the results of post-benefit income distributions of the year 1972 as well as the years 1963 and 1969 for comparison. Classified by income class, the post-benefit distributions look decidedly more equal in every year. For example, in Table 15, the share of lowest income class increased from 3.8% to 5.3% compared with an inprovement from 3.7% to 5.2% in 1969, and from 13.0% to 14.9% in 1963. On the contrary, the share of the highest income class declined across the board. The same picture emerged in Table 16 where one can see the

Table 16: Post-benefit Income Distribution by Quintile Group: 1963 1969 and 1972

(Percentages)

Quintiles	1963		1969		1972	
	Pre-benefit	Post-benefit	Pre-benefit	Post-benefit	Pre-benefit	Post-benefit
Lowest 20%	2.9	4.8	3.4	4.1	2.4	3.6
Second 20%	6.2	6.6	6.1	6.9	5.1	5.7
Third 20%	10.5	10.6	10.4	11.5	9.7	9.9
Fourth 20%	20.9	18.9	19.2	20.2	18.4	18.2
Top 20%	59.5	59.1	60.9	57.3	64.4	62.6
Total	100.0	100.0	100.0	100.0	100.0	100.0
Within top 20%						
Top 10%	42.2	42.6	43.9	40.0	47.5	46.1
Top 5%	28.4	29.4	31.1	26.5	35.5	32.6
Top 1%	9.6	10.9	10.5	8.9	15.0	13.0

Source: Krongkaew (29)

post-benefit improvement in income distribution in every year. But here the comparison was much easier because the size of household group was held constant. It must be noticed, however, that for the lowest 20% group, the rate of post-benefit improvement fell over the 10 year period from 1963 to 1972, that is from 4.8% in 1963 to 4.1% and 3.6% in 1969 and 1972

respectively. This indicated that although public expenditure programs were generally beneficial to the poor, the good effects tended to be falling in magnitude overtime. Referring back to the post-tax changes, this seems to accelerate the convergence into more gloomy future because, on the tax side, the trend had shown that the tax system was becoming more income disequalizing overtime. However, such a conclusion was still not entirely warranted because the time span was too short; it is quite possible that this tax-benefit convergence might reverse in the next period of study (1975/76).

The estimation of Gini coefficients for pre-benefit and post-benefit income distributions (Table 17) confirmed the overall post-benefit improvement as mentioned above. In 1972, the post-benefit coefficient improved 0.5746 from 0.6051 or a rate of improvement of 5.0%.

Table 17: Gini Coefficients of Pre-Benefit and Post-Benefit Income Distributions: 1963, 1969 and 1972

	Gini Coefficient		
	1963	1969	1972
Pre-benefit income distribution	0.5627	0.5550	0.6051
Post-benefit income distribution	0.5304	0.5151	0.5746

Source: Krongkaew (32)

The rate of improvement for 1969 and 1963 was 7.2% and 5.7% respectively. The trend of these rates of improvement had been declining in the some manner as the convergence phenomenon mentioned in the last paragraph.

Policy Recommendations

It should be quite obvious now that, although public expenditures improved income distribution generally, a large part of this was attributable to the effects of general service spending. This is hardly the type of expenditure that one would recommend its increasing in order to have more equal distribution of income. There are better policy changes that could be recommended which would make the whole public expenditure system much more income equalizing than before. These recommendations include the followings:

(1) Without question, agricultural sector should deserve the greatest attention from the Government. In the final analysis, both the problems of economic growth and income equality would be simultaneously solved by sufficiently high increase in farm productivity. But to accomplish this, many policies may have to be implemented at the same time. For example land classification and titling for the whole country should be completed as soon as possible so that the farmers may be able to use the land titles for the purpose of acquiring agricultural loans or credits, or are more willing to improve their own land once they know that their ownership is legally assured. While the land improvement programs are carried out for marginal farm land,

agricultural extension helps the better use of product inputs, or agricultural research helps the selection of right seeds or right techniques of planting, caring, and harvesting of the crops. In the past, the Government had spent a great deal of money on the construction of big dams without sufficient attention given to water distribution and control systems. As a result it was found that the rate of return to this type of agricultural investment was rather small. At present, however, the Irrigation Department has realized the problems, and is now trying to redirect its efforts to improve water distribution and control, and other on-farm development programs.

(2) Since the problem of farmer's indebtedness has become so serious that it could hamper farm operations or farmer's returns, the Government should seriously consider some plans that would help those debt-ridden farmers who face the risk of losing their own land. One way of doing so would be to transfer farmers' debts from private creditors to the Government. With the Government now the creditor, it can help the farmers manage their debts without having to face the grim possibility of losing their land quickly. The Government could also extend credits for debt repayment purpose as well as for production purpose.

(3) Instead of spending a large amount of budgetary appropriations on such ad hoc programs as the Tambon Project, the Government should be more concerned about more permanent or long-term farm assistance programs such as farm-price stabilization or crop insurance programs.

(4) On educational spending, the Government should concentrate much more on the primary level, particularly primary education in the rural areas, than on secondary or higher levels. To improve the quality of farm population, primary education provides a most important means. The Government should see to it that children of farm's households get completely free primary education with other things that make the schooling possible such as books, uniforms, or even school lunches. In the meantime, higher education which has been found to benefit mainly students from higher-income families should receive less subsidies from the Government than it is receiving now (for example in terms of very low tuition fees). Relatively speaking, vocational and technical education should receive more encouragement than higher education.

(5) The subject of defence spending involves the classic "gun-butter" dichotomy. More spending on defence would mean less resources for other spendings, and vice versa. No one can say what the optimal level between defence and non-defence spending for any country should be. However, a general rule seems to be that if the real threat to the national security and unity should originate from internal social dissatisfaction on whatever issues on the part of the majority

of the population (of which increasing income inequality could be one of the issues), non-defence spending should receive greater weight and priority. But if the real threat should come from external sources where even a most judicious application of diplomacy would fail to dissolve or lessen such a threat, then large defence spending is justified. One must always keep in mind that defence spending in itself is less likely to be productive and income redistributive than non-defence spending in general.

(6) Among neighbouring Asian countries, spending on health services by the Thai Government is one of the lowest. Furthermore, a system of direct transfer to the really needy is non-existent at present. These are the areas that the poor could be helped directly and quickly; they should deserve much greater attention from the public sector. Much more extensive health services for rural households, social insurance system for urban households, and basic welfare transfer or public assistance programs for all are recommended here.

(7) As public debt could lead to inflation that is likely to hurt lower-income people more than higher-income people, public debt policy should be implemented with caution with this rising price problem firmly in mind.

(8) The present budgetary system might need certain changes. The budgetary planning procedures tend to follow incrementalism more than a proper benefit-cost consideration; timetables of spending are not strictly kept which often lead to destabilizing public spending near the end of budget year or a budget overhang that makes the following year planning difficult; no serious evaluation of the effectiveness of the past spending other than that it has met its objectives or not; and so on. However, these administrative reforms are complex, and would need a careful study before any reform should be attempted.

VI. Incidence of Non-Budgetary Policies

After a somewhat quantitatative assessment of the distributive impact of Government's budgetary policies in the last section, it seems almost anti-climatic to turn to the same assessment of Government's non-budgetary policies in this section for the simple reason that no better than qualitative judgements will be offered here. From so many important areas, three will be selected for considerations. And within these selected areas, only a few specific, salient issues will be given attention to. These four areas are (A) agriculture, (B) industry, (C) labour.

A. Agriculture

Several recommendations for changes in agricultural policies that would make them more attuned to distributive problems have been suggested in the last section. In this section only those policies which do not involve large budgetary allocations that the Government spends on farmers but which involue the use of public coercion or extra need for farmers' cooperation will be discussed. These include policies on agricultural credits, fertilizer supply, land consolidation, and land reform. Land reform policy, because of its potentially profound effects on rural (and urban) income distribution, will be discussed more extensively than others.

(1) Agricultural Credit.

Until four years ago, the agricultural sector received less than 2% of the credit from commercial bank loans. From 1975 onward, the situation began to improve as the Bank of Thailand had set the requirement that a higher and higher percentage of commercial bank credits must be made to agricultural sector, either to the farmers directly or to the Government-owned Bank for Agriculture and Agricultural Cooperatives (BAAC). At the end of 1977, for example, commercial bank lending to agriculture amounted to 6,341 million baht or over 5% out of a total of 122,810 million baht. The present requirement for agricultural loan total deposits ratio is 11% and is likely to be raised to 13% soon.

Speaking in terms of income redistribution, there is little doubt that this measure helps reduce the concentration of income in the urban sector vis-a-vis rural sector, but whether this agricultural credit policy adequately helps really poor farmers is still being debated. Generally speaking, commercial banks detest this agricultural credit requirement because they are deprived of less risky borrowers in the industrial and service sectors, but if they must do it they either lend to the BAAC or to larger and more secured farmers if possible. Small farmers who are actually in greater need of credit often cannot get loans, especially if they do not have title deeds or certificates of land utilization. Eventually, by raising high enough agricultural credit ratio smaller farmers will get their loans

while the larger farmers are already soaked. The BAAC, as a public bank, is more sympathetic to poorer farmers but it needs to be more efficient in processing loan applications.

In all, the present agricultural credit policy should have favourable effects upon income distribution despite certain problems mentioned above. There is still room for the increase in this agricultural credit in the present situation.

(2) Fertilizer policy.

Whereas the agricultural credit policies as implemented by the BOT and BAAC were commendable, the fertilizer policy, until very recently , was quite objectionable in terms of helping the income positions of the majority of farmers. Such policy was the granting of promotional privileges and tariff protection to one fertilizer-mixing firm that virtually enabled it to exert monopolistic control over the supply (and therefore price) of domestic fertilizers. Instead of subsidizing fertilizers for the farmers, the Government subsidized a firm that supplied ordinary fertilizer compounds which were priced at some two thirds above estimated free market price on the false hope of large-scale domestic production of fertilizers leading by this particular firm. Although, free trade in fertilizers was finally reestablished in 1978 and the Government itself has provided large amounts of cheap fertilizers to farmers after extensive floods, the damagesdone to the farmers' well-being were

undoubtedly large. A total reevaluation or revamping of present fertilizer policy should receive a high priority from the government.

(3) Land consolidation.

The main objective of a land consolidation program is to improve the technical features of land utilization, most notably the water control and drainage systems. The result of this effort would be multi-cropping, or increased yield, or both. In order for the government to carry out land consolidation project, the present land consolidation law requires that over one-half of landowners in the planned area must consent to the project first. An average of 7% of land area may have to be used for public purposes such as roads or canals, but from the results of the success of land consolidation programmes in terms of increased form income through multi-cropping and increaned yield, this is a profitable sacrifice. Undoubtedly, land consolidation is one of the important factors contributing to the improvement of rural income and income equality.

(4) Land reform.

In the area well-established and well-discussed as land reform, theoretical literature and actual case histories are never lacking. It is not the intention here to dwell on the points concerning the economics of land reform in general, but to move straight to the problems of land reform in Thailand. Four aspects

of the problems will be discussed in this section: (1) What are the problems of land tenure in Thailand, and is there a need for land reform? (2) How could land reform help the farmers? (3) What are the plan for land reform in Thailand? And (4) How effective is the present land reform policy particularly for the reduction of income inequality?

Land tenure problems

Various government agencies may often give conflicting reports on the extent of land ownership in the country,but all seem to agree that the rate of full tenancy has increased in the last decade. The fact that the average size of farm holding increased from 21.7 rais in 1962 to 31.0 rais in 1974 could be explained, in fact, by the extensive clearing of forest land for farming during the late 1960's and early 1970's, or by the rapid loss of land ownership of many farmers. In 1973, the Ministry of Agriculture and cooperatives reported that the percentage of total rented areas to total land holdings for that year was about 12.3% (see Table 18) which was not much, but that figure may belie the uneven distribution of tenancy problems. From Table 18 it can be seen that the Northeast and the South had relatively little tenancy problem, but the problem in the North and particularly the Central Plains was quite acute. Table 19 and 20 further show the extent of tenancy in some provinces where the tenancy problem became quite serious, and how this problem

Table 18: Proportion of Rented Land Areas to Total Land Holdings, 1973.

(Unit : million rais)

Region	Total Land Holdings	Rented Land	Percent
North	23.2	3.7	15.5
Central	27.3	8.0	29.3
Northeast	48.8	1.6	3.3
South	13.7	0.6	4.4
Whole Kingdom	112.8	13.8	12.3

Source : Pipatseritham (55)

was attributable to concentration of land ownership of absentee landlords.

Table 19 lists 5 provinces that had the highest rented land to total agricultural land ratios in 1973. These provinces are Pathumthani, Ayuthya, Nakorn Nayok, Chacheongsao, and Saraburi; all located in the Central Plains and all are close to Bangkok. To show the extent of concentration of land ownership of absentee landloards, Table 20 lists the number of owners who owned more than 1000 rais of land in four of the five provinces listed in Table 19. The table in self-explanatory, and no futher comment is needed.

Table 19: Provinces Having Highest Rented Land to Total Land Holdings Ratios : 1973. (thousand rais)

Province	Total Agricultural Land Holdings (1)	Total Rented Land (2)	Percent (2)/(1)
1. Pathum Thani	841.1	619.3	73.6
2. Ayuthya	1,431.5	840.5	58.7
3. Nakorn Nayok	898.1	506.0	56.3
4. Chacheongsao	1,630.5	763.4	46.8
5. Saraburi	1,473.5	503.4	34.2

Source: Pipatseritham (55)

Table 20: Number of Owners Who Own 1000 Rais of Land or More in Provinces Around Bangkok, 1969. (Area:thousand rais)

Province	No. of Owners	No. of Plots	Land Areas	Land Area per Owner	Percent of Owners who reside in Bangkok
1. Pathum Thani	18	364	78839	4380	72.2
2. Ayuthya	29	1670	84369	2909	82.8
3. Nakorn Nayok	41	703	97853	2386	63.4
4. Chacheongsao	39	728	102084	2617	58.9

Source: Pipatseritham (54)

As the land frontier in Thailand is practically exhausted and the fertility of the soil is declining, the tenancy problems in Thailand are likely to worsen in the face of still very high population pressure. Many agricultural economists who had made systematic studies of tenancy situations in Thailand had recommended land reform as early as the middle of 1960's (Motooka [44], Seth [56]), but the issue was never taken seriously until early this decade.

The benefits of land reform.

As generally understood, land reform means expropriation of land from private owners by the government with or without compensation to its owners for the purpose of redistribution to landless or tenant farmers. The major goal for this change of farm status in the increase of farm income of those who cultivate the land. In the case of Thailand, it is believed that a successful land reform program would render the following benefits.

(1) Though it can be proven otherwise theoretically or empirically, the more likely result of land reform would be an increase in agricultural productivity due to the greater flexibility that a new land owner now enjoys in taking risk and experimenting with new methodds.

(2) As an owner instead of renter, the farmer does not have to sell his product immediately after harvest in order to pay rent, but can store it until he can get a better price.

(3) A group of agricultural economist (Chantagul and Others

[13]) argued that land reform can increase employment in rural sector because large-farm producers are likely to minimize labor costs through capital intensive method of production, whereas the smaller farm producers are more likely to adopt more labor intensive methods.

(4) Land reform would improve income equality through the breaking up of large land owners who normally are not farm operators themselves.

It should be reiterated that it is possible for the above benefits not to materialize completely, or at all, but, to date, there is no serious study that would suggest that the overall costs of land reform would outweigh its overall benefits in Thailand, especially with regard to the more equitable distribution of income that it should bring.

The plan for land reform.

The Agricultural Land Reform Bill was passed into law in January, 1975 with the vote of 65 to 45 with many members of Parliament failing even to attend the final session. In a way, the narrowness of the passing margin bespoke the tough legislative battle that this act had come through and the difficulties that it would face at implementation stage. The main features of land reform policy according to provisions in this Act can be summarized as follows:

a) Land reform is defined as the improvement upon the right and tenure in agricultural land including housing arrangement on that

land which is made possible by providing landless farmers or farmers who have very small land or farmers' institutions with public land or land which the state purchases or expropriates from its owners who are not making use of that land by themselves or who have more land than specified under the law. The reformed land may be sold to farmers on installment basis, rented or given out for the purpose of agricultural cultivation.

b) An Agricultural Land Reform Office (ALRO) would be established to implement the land reform program with the power to select the area to be reformed based upon the criteria that landlessness is high, size of land too small, tenancy too widespread, or productivity too low.

c) The ARLO is empowered to allocate up to 50 rais of land per family, or 100 rais for cattle raising. However, over 1000 rais of land can still be owned at least for another 15 years within the land reform area if the owner-operator shows that he is a highly productive or a modern farmer.

d) The payment for expropriated land would be paid out in cash and bonds. Twenty five percent of the value of the land will be paid out in cash with the rest paid out in government bonds with 8% interest and 10-year maturity.

The Land Reform Act required that the ARLO complete the survey of land for the purpose of possible reform within 3 years after the date of promulgation. At first the possible land reform areas were

set at 25 million rais, then reduced to 14 million rais, and finally to 8 million rais. In 1976 the Five-Year Plan for Agricultural Land Reform, 1977-81 was launched by the ARLO. This plan called for a reform of 0.5 million rais of land in 1977, 1 million rais each for the next two years (1978, 1979), and 2 million rais for each of the remaining two years (1980, 1981). After the end of the first five-year plan, the ARLO had hoped, therefore, to finish the reforming of 6.5 million rais of land.

Effectiveness of present land reform policy.

Perhaps such afore-mentioned plan was anything but practical. After 3 years of land survey, the ARLO accomplished only 600,000 rais from the targeted 10 million rais of land survey. In the first year under the Plan, only 100,000 rais of land were successfully reformed as compared to 500,000 rais in the Plan; but in the second year (1978) the reformed areas increased to 300,000 rais but still much less than the planned one million rais. The problems of land reform in Thailand are not so much administrative problems as problems of political will and determination as can be evident in the following observations:

(a) The Land Reform Act itself was made possible only after series of compromises with various landed interests. When the Bill finally was passed, it was then quite emaciated. The land reform was defined as an "improvement upon" property rights of land rather than

the usual "redistribution of" property rights of land. This could cause troublesome interpretation in the actual large-scale land reform.

(b) Provisions in the body of the law still make it possible for existing land owners to own more than 1,000 rais of land if they really wanted to.

(c) The lands that were being used for reform purpose were not so much large private lands that exceeded the limit set by law as state-owned lands taken from formerly forest areas and Crown land. As can be seen from the proposed land areas that would be needed for reform at the end of 1977-1978 periods (2 years) which amounted to some 3 million rais, about 2,660 million rais (or almost 87%) would come from State-owned lands, 40,000 rais from Crown lands, and only 300,000 rais from private lands. A land reform of this sort can only further aggravate deforestation while leaving the objective of breaking up large land holdings practically untouched.

(d) Too frequent changes of government have also affected land reform policies. In 1976, Kukrit's budget set aside only 45.8 million baht for land reform purpose, whereas Seni's budget in 1977 earmarked some 542.5 million baht, and Tanin's budget in 1978, some 279.2 million baht for the same purpose. However, while Kukrit intended to use only 45.8 million baht for land reform, which was very small, he had more or less, supplemented his other income redistributive drive through his Tambon project which

involved over 2.5 billion baht in expenses. The Tanin period was worst because not only his land reform budget was small, his public work program called for poor farmers to help in public work during off-farm season without pay.

All in all, the major obstacle to a successful land reform in Thailand seems to be the lack of political will and determination on the part of the Government, or the weakness of the Government in the present setting of Thai society to carry out even a modest, but proper land reform program. It is often cited that the success of land reform in Japan and in Taiwan paved ways to real economic development of those countries. Whether the same can be said for Thailand, no one can be certain; but it is quite certain that land reform could improve income distribution tremendously.

B. Industry

Industrial Promotion Policy.

Despite a very large number of public enterprises in Thailand (almost 100) the direct involvement of the government in industrial investment and promotion in the country is quite minimal. Industrial operations especially in the manufacturing sector, are mostly in the hands of private firms. However, the government has played a very significant role in stimulating industrial development in the last two decades through provisions of infrastructures such as road networks,

port facilities, public utilities and so on, and the use of fiscal and other incentives. whereas the industrial promotion policies had contributed a great deal to the success of industrial and service sectors, such success was normally measured in terms of the rise in value-added or the increased share in the national output. To fill in the gap this section will attempt to assess the distributive impact of industrial promotion policies.

Extent of Industrial Incentives.

Investment promotion policy had its inception in 1962 and since then had been adjusted many times to accommodate changes in economic and social situations. The latest change occurred in 1977 with the promulgation of the Promotion of Industrial Investment Act, B.E. 2520. The Act specifies various privileges that investors will receive. Apart from general privileges in terms of guarantee against nationalization and competition from public enterprises, and permission to own land for industrial activities and to recruit money overseas in the case of foreign investors, major specific privileges consist of.

(a) Exemption from import duties on machinery, comporent parts and accessories required for the industrial activity;

(b) Exemption from corporate income tax for the period from 3 to 8 years and exemption from taxes on income derived from the sales of by-products or intermediaries;

(c) Protection against competitive imports when justified through import bans, tariff walls, or surcharges on foreign imported products for one year at a time.

(d) Exemption from duties and taxes on raw material imports and reexported items, and exemption from export duty on exported good.

And for those firms which will invest and operate in a designated industrial estate, additional privileges will be granted. They include, for example, reduction of up to 50% of import duties and taxes on raw materials for up to 5 years; reduction of up to 90% of business tax on sales of sales of products; permission to deduct twice the amount of costs of transport, electricity, and water supply from corporate tax income, and so on. Altogether, these promotional packages are very generous indeed, and they must have been quite attractive for prospective investors. During the first 10 months of 1978 more than 150 firms were granted promotional privileges with the total proposed investment of 22.1 billion baht. Until about 1977 the Board of Investment approved, on the average, about 60% of the applications for promotional privileges. Since then it has become more stringent in its selection process due to many criticisms that have been leveled against its decisions. The amount of investment brought about by investment promotion policy is less than one percent of total private investment of the country each year, but as we have seen in the case of fertilizer monopoly, the government's promotional decision could

have welfare repercussions far exceeding what its share in total investment seems to indicate.

Some Analytical Bases for Distributive Assessment.

The single most important objective of promotional incentives mentioned above is to mobilize investment both from domestic sources, foreign sources, and joint ventures. These investments would then become the engine of growth to the national economy. So far the success of each investment is judged mainly in value-added in GNP; the only distributive effect that has been mentioned in association with this investment promotion effort is the number of jobs that has been created as a result of these investments. While there have been many studies on allocative or economic effects of certain aspects of investment promotion policies in Thailand (Akrasanee [6], Intarathai [25], Tambunlertchai [62]), none is found that investigates mainly distributive effects of such policies. In a way this is quite understandable because the analytical bases for such a study was still very undeveloped. What are want to know is how these investment promotion policies affect different persons or households in different income classes, or how personal income distribution has changed as a result of such policies. Or failing that, at least how the functional distribution of income has changed as a result of such policies.

In a now classic article by G. MacDougall [39] on the analysis of the benefits and costs of foreign investment, such benefits and costs

were weasured in terms' of gain and loss of labour and capital within the host country. Set in a neo-classical framework of one product market, two factors of production : capital and labour, perfect competition, full employment, and a normal downward sloping demand for capital, an increase in foreign capital would reduce the marginal product of capital and raise the marginal product of labour which was then assured to be independent upon the size of capital. If the elasticity of demand for capital is greater than unity, the new foreign investor would make a net gain from increased real income, but the old domestic capital owner would lose through the fall in rental rate and existing labour would gain through increased wage rate. So, assuming that the foreign investor remits all his profit overseas, the situation within the host country would be some sort of a redistribution of income from capital to labour. Within this setting investment from foreign sources would help improve income distribution by raising the relative income of wage earners at the expense of capital owners on the assumption that the former are generally clustered around lower-income classes and latter around higher-income classes.

But if the supply of labour increases as a result of the increase in average wage rate, the influx of new workers, say, from migration from rural sector, would drive the wage down, probably to the old equilibrium level. The employment in the sector where the investment has just increased world of course increase too, but there

is no welfare gain to domestic labour because the final wage rate would equal the opportunity cost of leaving the old jobs in the farm for these new workers; only the place of employment has changed. However, if the influx of labour is too great, the wage rate could be driven down below the old equilibrium level. In this case, then, the labour as a group would suffer and the domestic capital would gain.

Recently, Burgess [12] has extended MacDougall's model into a two-product model with tradable and non-tradable goods. Assuming that foreign investment is made in tradable sector only, initially the return to both foreign and domestic capital world fall whereas the return to labour would rise. But if labour is free to move between the two sectors, the movement of labour from non-tradable sector to tradable sector would lower the supply of non-tradable goods, and with the ensuing excess demand of these latter goods, their relative prices would go up, initiating a reverse shift of the labour force which would then raise the return to capital in the non-tradable good sector. Whether this new equilibrium results in more or less output of non-tradables, that is whether more or less labour is employed in non-tradable good sector, cannot be determined on purely theoretical ground; it has to be empirically determined.

Therefor , labour might be adversely affected while domestic capitalists might be better off with influx of foreign capital, depending

upon the values of the elasticities of substitution between the capital and labour in each sector, and the elasticity of substitution in consumption between traded and non-traded goods. If both elasticities of substitution between capital and labour, and between traded and non-traded goods in consumption are sufficiently low, an influx of additional foreign capital could distribute real income from labour to capital.

In a more general analysis of the use of tax incentives to encourage investment, Usher [64] called attention to what he termed the redundancy of the incentives. According to him, part of incentive program will be redundant if the net addition to investment by such program will be less than what the amount of investment actually subsidized. So, to see whether a certain incentive program is redundant or not, one should compare among incentive alternatives according to the scale :

$$CSE = \left(\frac{1}{K}\right)\left[\sum_{n=1}^{d} S_n/(1+i)^n\right]$$

where CSE is the "capital subsidy equivalent" scale; K is the quantity of investment; i is interest rate; Sn is the value of subsidy in year n. The subsidy in this sense would be the loss of various kinds of tax revenues. The distributive implication from this simple model is that if the rate of redundancy defined as the difference between the subsidized investment and total investment induced by the incentive program over the subsidized investment is

positive, then the country is actually redistributing potential tax revenues to new investors. The final redistributive impact is impossible to predict a priori, but if the loss of potential tax revenue also means a loss of public expenditure on social welfare and if this loss is greater than the new investment which is assumed distributionally neutral, then the investment incentive program will clearly disequalize income distribution.

Evaluation of the Thai Situations.

How much could the above-mentioned models be applied to the situations in Thailand? Probably not much more than just a guideline for qualitative judgment. No one has really done a study in this direction before but some studies on the allocative effects of investment promotion policies in Thailand did provide some glimpses at the distributive effects. Few possible areas could be considered where the distributive effects of investment promotion policy could be detected.

(1) The extent to which the investment induced by promotional incentives would create employment opportunities could be judged primarily as one of the most important objectives on the distributive point of view. If the promoted industry becomes capital-intensive instead of labour-intensive in a country where labour is numerous and poor and capital is scarce such as the case of Thailand, then the objective of redistributing more income to labour sector would not be fully reached. There are many ways to define capital/labour intensities;

one convenient way is to see the relationship between capital investment made and the jobs created. If this capital investment to number of jobs ratio exceeds a certain, specified level, then such industry is capital-intensive, if not, labour-intensive. Or the amount of investment under incentive program to total investment is compared to the employment generated under incentive program to total employment. If the former is larger than the latter, then the program is capital-intensive, and so on.

According to this criterion, it was found that investment promotion policies of Thailand up to the early 1970's at least for the part that applied to foreign investment and joint ventures could be called capital-intensive as the capital investment per job was very high and the number of jobs created in relation to total labour force was quite small (Tambunlertchai [62] [63]). This said nothing about the wage rate in the promoted industry which was still quite low. From the model described in the last section, if this employment generation draws labour from the outside sector (rural sector) which is unemployed or underemployed, then the labour would gain. But if the rural labour surplus no longer exists such as when farming becomes more intensive this gain could be washed out. Furthermore as the elasticity of substitution between capital and labour in Thailand seems to be quite low (Suvaporn [60]), a capital-intensive investment would help capital relatively more than labour. All in all, the success of investment promotion in terms of output

growth must be weighed against possible distributive deterioration.

(2) Until very recently the investment promotion policy of Thailand aimed mainly at import substitution. But the categories of promoted industries were quite varied and haphazard; the range of promoted goods and services included, for example, food processing, textiles, television sets, air conditioners, car assembly, sight-seeing tours, and private hospitals. Many of these products or services obviously benefit the urban high-income consumers more than rural consumers.

(3) Since tariff protection was part of the incentive package, a very high tariff wall for general consumer goods would induce very high domestic prices for these goods. The effect of high consumer-good prices would erode consumption power of the low-income households relatively more than high-income households. Except for few basic consumer goods, product prices of most promoted firms are not controlled This could enable many promoted firms to charge high prices behind protective tariff walls and earn high profits at the expense of the majority of consumers who are poor (12, p. 130).

No one has yet computed the potential loss of tax revenues as a result of investment promotion incentives, but it is believed to be enormous. If the incentives have to be provided otherwise no investment will be forthcoming, then such incentives are justified. But as a general rule, the government should not give incentives in

the industries which have good prospects in which potential private investors would try to invest anyway regardless of whether there would be public incentives or not. To give just two examples in Thailand to show how this principle was disregarded: first, the textile industries were overly promoted until they suffered from overproduction: second, private hospitals were highly promoted until they are now everywhere in Bangkok but they tend to serve the rich more than the poor. Considering the inadequacy of public hospitals and rising urban income, such private hospitals would naturally attract private investors without any extra incentives. But the situation turned out to be that the rich who used promoted private hospitals, were partially subsidized by the potential tax revenues foregone (13, p. 130). Of course, it is not always easy to determine which industry to be encouraged fiscally and which industry left to the market force, but it is not impossible with large enough professional staff.

(5) Generally speaking, eventually domestic owners of capital would be favoured to control the operation of the promoted firms over foreign owners for the obvious reason that profits would remain in the country. But domestic ownership will not always guarantee a more equitable distribution of income. Promoted firms that are repeatedly owned by a small family group or a few family groups can add to more concentration of wealth. This point is normally not taken into considerations by the government because

distribution of income is normally not a point of concern. Domestic ownership that should receive more attention is ownership in the form of public company or cooperative.

In summary, the distributive impact of investment promotion policy is very difficult to gauge. Analytical frameworks that were mentioned could only be used as a guideline to evaluate such impact. What we learned, however, was that it was possible for the post-investment distribution of income to become more unequal under certain conditions despite the increase in total income through the increase in capital investment. The analysis of the situations in Thailand has put several question-marks upon the claim of success of the past investment promotion programs. Although, at this stage, it cannot be said that the industrial investment policy has contributed to the worsening of income distribution, at least it cautions one against ready acceptance of higher number of promotional privileges granted as an indication of a successful all-round investment policy.

C. Labour

History of the relations between the government and labour movement in Thailand has not been a good one. Suspicion and distrust on the part of the government has kept such movement weak and unorganizied for almost 3 decades since the establishment of the first labour union in 1944. In 1956, the first comprehensive labour law was enacted but was repealed soon after it was put to use by a

military coup in 1957. Although new labour regulations gave reasonable protection to labour, the right to form union and initiate industrial actions were still denied. It was not until 1975 with the passing of the Labour Relations Act, B.E. 2518 that modern labour policy was adopted with both labour and management given rights to organization, collective bargaining, settlement of disputes, and industrial actions.

The following section discusses two aspects of labour policy that are likely to affect the distribution of income of households particularly in the urban areas : the enforcement of minimum wage low, and the planned introduction of social security scheme. It will attempt to show how minimum wage and social security program help or hurt low-income households and the resulting income distribution.

(1) Minimum Wage.

As one of the measures designed to essentially help menial and unskilled workers, the Minimum Wage Committee was set up in the Ministry of Interior with the power to set minimum wage level for any industries or locations throughout the country. The main criterion for setting minimum wage is the level of income "which will enable a worker with two dependents to live in an ordinary way of life like any other people in the society." Since 1972, the minimum wages have been changed four times, and now set at 35 baht per day for workers in Bangkok Metropolitan Areas. There are no built-in adjustments for the effect of inflation in the setting of each minimum wage, as a

timetable for the next minimum wage review. Each change normally came from the pressure by the labour.

What are the overall effects of minimum wage enforcement? Theoretically speaking, in a perfectly competitive labour market, the setting of minimum wage above the equilibrium wage level would result in the falling employment. And this simple analytical result has often been used by the opponents of the government's tampering with wage level in the labour market. They argued that only those workers who continued to be employed, who received less than minimum wage before, would gain from this minimum wage low, but those who lost their jobs would suffer. As a group, the unskilled workers to whom the minimum wage law intended to help could end up with a net loss because the employers could compensate the rise in basic wage with many fewer unskilled workers and more skilled workers. In a study about the effect of the change in minimum wage in 1975, Pasi and Uthaisri [52] reported that there was a small but distinct decline of employment in industries employing much unskilled labour after the announcement of the new minimum wage.

Nevertheless, the situations in Thailand might be too complicated for the result of the simple wage-employment model to be applicable. The demand for unskilled or low-skilled workers in some industries such as construction or transport may be quite inelastic in the metropolitan areas, or the supply of skilled workers would be

quite limited at present so that the abovementioned scenario with the employer replacing the unskilled may not always happen. Furthermore the wage share of industrial output has been quite low traditionally so that new minimum wage should have little effect on the firm's profit rates. There might be exceptions in certain industries such as textile industries which have been operating at a loss for some time, but these industries had been through very profitable years before; the need of workers should not be compromised for managerial errors. The finding of Pasi and Uthaisri referred to above looks suspect because the data might be incomplete and the time under study was certainly too short.

It has been argued that low wage rates in the industrial sector reflects the opportunity cost of work in the agricultural sector which is kept very low by low farm productivity. This implies that to raise minimum industrial wage level without artificial force, farm productivity must be raised first. But farm workers and urban workers are different. The income-in-kind which the subsistence farm workers receive is absent for industrial workers, so the latter's wage rate might have to be raised at an artificially higher level through minimum wage. Besides, the main argument for minimum wage was based upon objective calculation of the minimum requirements in food and other necessities (Suwankiri and Others [61]), and supported another objective study of the determination of poverty level of Thai households (Krongkaew [33]), it was not meant to disrupt industrial

activities.

For unskilled workers, the minimum wage could help raise their basic income. This should improve urban income distribution which is normally more unequal than rural income distribution. The fear that higher urban wage would trigger harmful migration from rural workers would be dispelled by the fact that attempts have now been made to increase productivity at the farm level through intensive farming and other techniques which are likely to keep farm labour at the farm. The policy of rural location of new industries would also help in this direction. Considering in terms of distributive improvement, minimum wage policy should continue to receive serious support from the government.

(2) Social Security Scheme.

Despite the fact the Social Insurance Act, B.E. 2497 is still in force, Thailand is still without a proper social security program. After a brief attempt to set up social insurance administration in 1955, which failed, the social security plan was shelved, and only occasionally would receive a periodic review by the government. In the meantime, however, the workmen's compensation scheme which could be regarded as a variant of social security scheme was able to get started. At least the issue of compensation for employment injuries is now publicly instituted which has helped the injured workers and their families tremendously.

The operation of the workmen's compensation scheme becomes quite successful today with both employers and employees fully supporting it. From the worker's point of view, being relieved of the financial burden of costly medical services from his employment-caused sickness and injuries is an apparent benefit to be received from the workmen's compensation scheme, not to mention the continuing income during the period of incapacitation. But a more comprehensive social security program could do much more. Ordinary sickness could be covered, as could old age, unemployment, invalidity, or death benefits.

These benefits could be construed as potential money or income that can be imputed and added to the income of the insured. The worker's real income must increase as a result.

It is true that social security contributions by the workers are a kind of tax put on labour's income, so the benefits received from social security service would be offset by these tax burdens. If the incidence of these social security contributions is regressive, which is what is normally found (Brittain [11]), then the scheme would in fact redistribute social security benefits from lower-income workers to higher-income workers. But there are ways that these problems can be corrected. Very low wage earners could be exempted; sliding-scale rates of contribution could be attempted; the ceiling income could be raised or abolished altogether; or the government could increase its share in the tripartite contribution system. The detail

of a scheme which would really help poor workers without being unfair to employers could be worked out without much difficulties; the major requirement for its success is the government's willingness to commit itself to such an endeavor.

A feasible social security or social insurance scheme with desirable income redistributive effects would probably have to meet the following requirements:

(a) Contingencies covered should not be too many at the start. After initial success of these few benefit schemes, they can be extended to cover more contingencies. Employment injury seems to have received top priority in most plans followed by sickness, maternity, funeral expenses, old age, invalidity, survivorship, and unemployment roughly in that order.

(b) Only wage earners would be required to insure; the self-employed would be excluded from the scheme for obvious administrative reasons. At first, only workers in establishments having a certain number of employees, say 10 or 20, will be insured. Later, all employees will be insured.

(c) Contributions will be shared by employees, employers, and the government but the rate should be higher for the last two contributors. Employees having income lower than a given amount (floor or minimum income) will have their share of the contribution

made either by the employers or the government, but preferably by the government.

(d) Benefits should be paid out both in cash and in kind. Waiting periods before payment of benefits are necessary, but must not be too long. A system of wage compensation while under temparary incapacitation should be adopted.

VII: Distributive Impact of Overall Government Policies

If all policies had achieved their objectives of proper redistribution of income from the rich to the poor, then there would be no need to discuss this chapter because one can simply add up the net benefit and see how much the post-government income distribution has improved. But this is not the case: some policies were income disequalizing such as two policies and some were income equalizing such as public expenditure policies. The overall distributive effects would therefore be the results of net differences between these equalizing and disequalizing effects. This chapter will attempt to integrate such net effects by first considering the net effects of budgetary policies, then those of non-budgetary policies, and finally some conclusions as to the overall distributive impact of government policies in Thailand.

1. Net Fiscal Incidence.

When tax incidence was considered, the revenue raising incidence was assumed to be distributionally neutral, and vice versa for expenditure incidence. In bringing the incidence of the two policies together, we simply add the net benefits from taxes and public expenditures to the income of the appropriate income classes. The income after the impact of the burden and expenditure benefit have been absorbed is called the

"post-fisc" income, and its distribution, "post-fisc income distribution". Normally this distribution is the end-result of a fiscal incidence study; one now has some bases upon which to say how effective were the government's budgetary policies in redistributing household or individual income.

The net benefits of government's budgetary policies to households by income class are displayed in Table 21. Both the absolute net benefits and relative net benefits are shown. To be consistent with the terminology of the tax and expenditure incidence studies, the relative net benefit which is in fact the absolute net benefit divided by appropriate money income of each income class would be called "effective fiscal rate".

From Table 21, it was quite clear that the lowest income class received the highest relative net benefits with the effective fiscal rate of 29.4%. But the following two income classes seemed to gain relatively less than average as their effective fiscal rates were only 8.2% and 9.2% respectively compared to average effective fiscal rate of 9.4%. But the results shown in Table are by no means final results because the total net benefits of 6,844.0 million baht were in fact the excess of public expenditures over public revenues which was simply added to income of households. This unbalanced budget can not exist in real life; the deficit must be financed in some ways. This issue of budget deficit was not discussed before

Table 21: Absolute Net Benefits and Effective Fiscal Rates of the Fiscal System, 1972.

Income Class (Baht)	Absolute Net Benefits (million baht)	Effective Fiscal Rate (%)
Under 3000	812.7	29.4
3000 - 5999	497.5	8.2
6000 - 8999	556.5	9.2
9000 - 11999	590.2	10.2
12000 - 14999	436.6	9.2
15000 - 17999	390.1	10.6
18000 - 29999	886.8	6.6
30000 and over	2,623.5	8.7
All Classes	6,844.0	9.4

Source: Krongkaew [32]

because it was dependent on the size of public expenditures, and so far the subject of tax and public expenditure had been treated separately. To get the final net fiscal incidence, the problem of the distributive effects of budget deficit and its financing must be settled first.

Distributive Effects of Public Deficit Financing.

When public expenditures exceed public revenues the government has many options to finance such public deficits. The easiest way would be for the government to increase the money supply in order to make up the deficits. In the Thai context, this could be done by drawing down the treasury reserves or borrowing from the Bank of Thailand. To balance the budget this way is likely to lead to inflation unless the economy has high rate of unemployment or the resources are underutilized. The government of course borrowed from other non-inflationary sources as well, but using the treasury reserves or borrowing from the Central Bank figured prominently in the public debt pattern of the Thai fiscal system.

What is of concern here is how a rise in the price level affects each income class differently. A general view is that such rise would hurt lower-income households more than higher-income households, relatively speaking, because the proportion of income used for consumption would be higher for the latter. Or, it could be because the income of the poor is rising more slowly than the price level. In her study on the relative impact of price increases on Thai households, Meekook [43] concluded that the low-income groups would be more adversely affected by the price increases than the high income groups.

Since it was not known what part of public debt would cause inflation, and how the distribution of income of households would

change after inflation, the estimation of the distributive impact of public debt is extremely difficult. However, it could reasonably be assumed that the actual effects would fall between two extreme assumptions, that is (a) if the public deficit is assumed to be financed by a direct, income-proportional transfer from all households or by income-proportional tax levied on all households, then the effect of the deficit would be distributionally neutral because the burden of the deficit is allocated to households according the distribution of household income; or (b) if the financing is made by equal direct transfer from all households, or, to the same thing, by a head tax on all households, then the burden of the deficit would be equally shared by all households. These two assumptions can be rephrased: Assumption A assumed that the burden of deficit financing was allocated to households according to the distribution of household income, and Assumption B assumed that the burden of deficit financing was allocated to each household equally according to the percentage distribution of household itself.

Post-Fisc Income Distribution.

The income after tax burden, after expenditure benefit, after deficit burden would be called "post-fise" income. The distribution of post-fisc income will be the final stage of fiscal incidence study set in the situation of balanced budget. Deficit burden according Assumptions A and B would of course result in different post-fisc

income distributions, but the size of the difference would depend on the size of public deficit, the distributions of income and household in general, in the year under study. In Table 22 the post-fisc income distribution by income class for 1972 is presented, in comparison with the same distributions in 1963 and 1969, all based upon the allocation of deficit burden according to Assumptions A and B. Table 23 shows the same post-fisc income distributions but by quintile group.

In reading Table 22. one should immediately notice that Assumption A, when used, improved the post-fisc income distribution while Assumption B worsened it. For 1972 the post-fisc income share of the lowest income class according to Assumption A was 4.5% compared with 2.3% according to Assumption B, and 3.8% the pre-fisc income share. For higher income groups around the middle income range the differences caused these two assumptions became quite small Table 23. might be easier to read. For example, we see that in 1972 if deficit burden was allocated according to Assumption A, the income share of the lowest income group improved from 2.4% to 3.0% in the post-fisc situation while Assumption B worsened it to 1.1%. As was mentioned earlier, the results generated by these two assumptions were two possible extremes that might contain the actral post-fisc income share. To see the range of post-fisc income distribution that might contain the true distribution is possible by computing the Gini coefficients of post-fisc distributions that were affected by allocation of deficit burden according to both Assumptions A and B. Such Gini coefficients are presented in

Table 22: Post-Fisc Income Distributions with Different Assumptions Regarding Impact of Public Deficit by Income Class: 1963, 1969, and 1972

Income Class (Baht)	1963			1969			1972		
	Pre-fisc	Post-fisc		Pre-fisc	Post-fisc		Pre-fisc	Post-fisc	
		Ass.A*	Ass.B*		Ass.A*	Ass.B*		Ass.A*	Ass.B*
Under 3000	13.0	13.3	11.8	3.7	5.0	3.8	3.8	4.5	2.3
3000- 5999	14.0	13.8	13.5	9.3	9.8	8.9	8.3	8.2	6.8
6000- 8999	26.4	26.3	26.6	10.6	10.7	10.4	8.3	8.3	7.8
9000-11999				9.2	9.3	9.2	7.9	7.9	7.8
12000-14999	13.1	12.6	13.0	8.1	7.9	8.0	7.2	7.2	7.3
15000-17999				6.8	6.6	6.8	5.0	5.1	5.2
18000-29999	33.5	34.0	35.2	52.3	50.7	52.9	18.5	18.0	18.8
30000 and over							41.0	40.8	44.0
All Classes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*Note : Assumption A assumes that the burden of public deficit was allocated to households according to their distribution of income; Assumption B assumes that the same burden was allocated to each household equally.

Table 23: Post-Fisc Income Distributions with Different Assumptions Regarding Impact of Public Deficit, by Quintile Group: 1963, 1969, and 1972

Quintiles Group	1963			1969			1972		
	Pre-fisc	Assumption A	Assumption B	Pre-fisc	Assumption A	Assumption B	Pre-fisc	Assumption A	Assumption B
Lowest 20%	2.9	3.8	2.8	3.4	4.0	2.9	2.4	3.0	1.1
Second 20%	6.2	6.0	5.6	6.1	6.8	6.1	5.1	5.3	4.3
Third 20%	10.5	10.3	10.1	10.4	11.3	10.8	9.7	9.7	8.9
Fourth 20%	20.9	18.8	18.9	19.2	20.0	19.8	18.4	18.2	17.8
Top 20%	59.5	61.1	62.5	60.9	57.9	60.4	64.5	63.8	67.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Within Top 20% Group									
Top 10%	42.2	44.3	45.6	43.9	40.6	42.9	47.5	47.2	51.2
Top 5%	28.4	30.7	31.9	31.1	27.1	29.1	35.5	38.7	37.4
Top 1%	9.6	11.5	12.2	10.5	9.1	10.3	15.0	13.7	16.4

Table 24.

Table 24: Gini Coefficients of Post-Fisc Income Distributions According to Different Assumptions about Burden of Public Deficit.

Income Distribution	Gini Coefficients		
	1963	1969	1972
Pre-fisc	0.5627	0.5550	0.6051
Post-fisc			
- Assumption A	0.5578	0.5271	0.5931
- Assumption B	0.5838	0.5614	0.6516

Source: Krongkaew [32].

It is clear from Table 24. that the range of possible true post-fisc distribution as measured by Gini coefficients straddled the pre-fisc distribution in all three periods. One might be tempted to the find the true post-fisc distribution by adding up the two, post-fisc Gini coefficients and dividing the result by two, in which the average received would show that the post-fisc income distributions worsened in every year under study, as the new average Gini coefficients would be all higher than the pre-fisc coefficients. But this technique in certainly not warranted because no one can be sure the true post-fisc distribution would fall exactly in the middle of the range. The best conclusion would probably be that it would be more or less the same as

the pre-fisc income distribution, with an additional qualification that the present fiscal system could probably do no better than this but it can do worse. Put it differently, it could be said that, at best, the government through its budgetary policies could effect no change at all in the distribution of income of households, but at worst, it could make such income distribution become more unequal.

It seems odd that a study which used very quantitative techniques to find out the magnitude of the distributive impact of a fiscal septem ends up making a very tentative, though not imprecise, conclusion such as mentioned above. This, however, is necessary considering the sensitiveness of the results to certain assumptions used in the study.

2. Residual Effects of Non-Budgetary Policies

In the present state of knowledge, there is no way that one can make a definite conclusion about the incidence of public non-budgetary policies. Unlike the study of fiscal incidence where the magnitude of tax burden as assumed to be equivalent to the amount of tax revenue collected, and the magnitude of expenditure benefit is assumed to be equal to the amount of public expenditure itself, and

only first-round effects will be considered: no spillovers, no lags, no secondary repercussion, the estimate of incidence of non-fiscal policies must be made purely on qualitative or intuitive judgments. It is impossible to rank any policy according to the significance of such policy in terms of distributive impact. A very innocent surcharge on fertilizer impact could indeed have greater distributive impact than expenditures on big dam construction. Every thing is tentative and qualitative, and a judgment should be made only after a careful study of the prevailing situations.

Foutunately, the result of fiscal incidence study provides some unexpected help. Since it was found that the distributive effects of government's budgetary policies were more or less neutral, the residual effects of non-budgetary policies could be responsible for the change in income distribution of the period following the one under study. In other words, if the government's budgetary policies have a neutral effect on the pre-fisc income distribution, the post-fisc income distribution must be influenced by government's non-budgetary policies and other private economic forces. In a simple algebraic relationship, if Y^{Pre} is the pre-fisc income, B is the net benefit of government's budgetary policies, NB is the net distributive impact of non-budgetary policies, and Y^{Post} is the post-fisc income, and resuming that the private economic forces are negligible or constant, then

$$Y^{Post} = Y^{Pre} + B + NB \qquad (1)$$

If B is neutral then NB would exert all the distributive influence on Y^{Pre}. But as regard to time, Y^{Post} of this year would be same as $Y_t^{Post} = Y_{t-1}^{Pre}$ where t is the year in question, so that Equation (1) would become

$$Y_{t+1}^{Pre} = Y_t^{Pre} + B_t + NB_t \qquad (2)$$

So, if income distributions are known for two successive years, say 1972 and 1973, the difference in income inequality between these two years would be attributable to the impact of non-budgetary policies only because B_t has already been found to be distributively neutral. As such, the non-budgetary policies become very important income redistributive instruments for the government, much more so than it was originally expected. As the distributive patterns of fiscal incidence remained quite neutral through out the 10 year periods from 1963 to 1972, it could perhaps be concluded also that the increase in income inequality as shown in the income distribution of 1972, could be caused by the culmination and accumulation of all sorts of income disequalizing effects associated with government's non-budgetary policies since 1963. These periods, incidentally, coincided with the first two economic development plans which saw the Government implementing many policies which would help the country grow quickly (Industrial investment policy was of course one of them). If the above conjecture has any elements of truth in it, then this could provide a vague proof to the assertion that the past economic development policies of the government had contributed to wider disparities of income distribution.

3. Conclusion: The Need for All-Out Efforts.

In summary, this paper has attempted to assess the distributive impact of government's policies by first dividing such policies into budgetary part and non-budgetary part. Each part was then discussed separately. The budgetary part was, however, treated rather more extensively because the techniques for estimating its distributive impact (so-called fiscal incidence techniques) which have become quite popular and quite well-accepted among fiscal economists today could be applied to the Thai situations. But for non-budgetary part, estimating techniques were still very undeveloped and fragmented, so only qualitative judgements about its distributive impact were attempted here.

The main findings of the budgetary part are that the public revenue system of Thailand was slightly regressive in income-proportional terms and tended to worsen income distribution a little; that the public expenditure system was also regressive in income-proportional terms but tended to improve income distribution a little; and that overall effects of the whole fiscal system upon income distribution were quite small and quite neutral. Depending on how public deficit was treated, the role of government's budgetary policies on income distribution was neutral at best, and at worst, it could be income disequalizing. As for the non-budgetary part, when the effects of fiscal policies were consistently distributionally neutral, the role of non-budgetary policies became crucial because these policies provided the residual

effects that made the existing income distribution more equal or more unequal. Based upon this simple conjecture, the worsening of income distribution in 1972 as compared to 1969 and 1962 lent credence to the argument that the past economic development policies had a part in causing wider disparities of income of Thai households.

As in each chapter some policy recommendations can be found which, if adopted, could lead to an improvement in income distribution, there is no need to discuss policy issues again. However, a proper approach to policy implementation is that each government organization, when formulating a policy or carrying out a policy, always keeps in mind its possible unfavourable effects on income distribution, if any, and tries to rectify them or reduce them as much as possible without jeopardizing the success of the whole policy. If this much can be done by all government units, it is tantamount to an all-out effort that would certainly improve income distribution in the country.

Annex I : Methods of Estimation.

The following account describes the steps involved and the data required in the computation of tax and expenditure incidence of the Thai fiscal system in 1972. For the reason of space, the rationale behind each step will not be discussed in detail; interested readers can consult several sources of reference on the subject of fiscal incidence studies such as Bird and De Wulf [10], De Wulf [17], or for details particularly relating to this present paper, Krongkaew [28] and [32].

On Tax Incidence.

1. Income distribution base is obtained from Report on Socioeconomic Survey, B.E. 2541 - 2516 published by the National Statistical Office.

2 Types of government revenues are selected. All types of taxes and other public revenues such as fees, royalties, proceeds from government's sales and service, contributions from public enterprises are encluded. Exempted are local governments' revenues, foreign aids, and part of central revenues which are clearly contributed by foreign residents such as a part of tax on jet fuels. Government revenue dath are obtained from various departments of Ministry of Finance.

3. After shifting assumptions are made, distributive series

are found which will be used to allocate tax burdens to households. Major distributive series are patterns of household's consumption expenditures on various goods and services obtained from the same socioeconomic survey report as mentioned above.

4. Once the burdens are allocated, the after tax income distribution is assessed to see if there is any change.

Mathematically, the steps taken can be summarized as follows:

$$Y_{ir} = (p_{ir} \times N_r) M_{ir} \quad (1)$$

$$b_{jir} = \sum_{k=1}^{n} T_{jkr} \times S_{kir} \quad (2)$$

$$S_{kir} = e_{kir} / \sum_{i=1}^{L} e_{kir} \quad (3)$$

$$B_{ir} = \sum_{j=1}^{m} b_{jir} \quad (4)$$

$$ET_{ir} = (B_{ir} / Y_{ir}) \times 100 \quad (5)$$

$$Y_{ir}^{Post} = Y_{ir} - B_{ir} \quad (6)$$

Where i = 1,---, L is income class

j = 1,---, m is type of tax

k = 1,---, n is type of distributive series

r = 1,---, 5 is geographical region of Thailand

p_{ir} = percentage share of number of households in income class i in region r

N_r = total number of households in region r

M_{ir} = mean or average income of household in income class i in region r

Y_{ir} = total income of households in income class i in region r

b_{jir} = absolute burden of tax j upon income class i in region r

T_{jkr} = amount of tax j the burden of which is to be allocated to households according to distributive series type k in region r

S_{kir} = actual pattern of distributive series type k which is used to allocate burden to income class i in region r. It is in fact the distributive share of some variable e of income class i over total share of all income classes. Suppose e is the expenditure on tobacco, $e_{ki} / \sum_{i=1} e_{ki}$ would be the share of tobacco expenditure (k) by income class i over the total expenditure on tobacco by all households.

B_{ir} = total absolute burden of overall tax system in region r

ET_{ir} = effective tax rate of income class i in region r.

Y_{ir}^{Post} = post-tax income of income class i in region r

On Expenditure Incidence

1. Income distribution base is already available from tax incidence part.

2. All types of expenditures as appropriated in the 1972 Budget are included. The "accountiry" or "cost-incurred-on-behalf-of" approach (Gillespie [21]) is used to identify the magnitude of the benefits. In effect, total benefits are assumed equal to total costs.

3. To allocate benefits to households in different income classes, several distributive series are used in the same ways as in the tax incidence study.

4. Once the benefits are allocated, the "post-benefit" income distribution is estimated to isolate the effect of public expenditures.

Mathematical relations in these steps are exactly the same as those in the tax incidence part, only the word tax is substituted by expenditure, and burden by benefit. For example, in expenditure incidence part, b_{ijr} will be the absolute benefit of expenditure j received by income class i in region r, or T_{jkr} will be the amount of expenditure j the benefit of which is to be allocated to households according to distributive series type k in region r, and so on.

NOTES

1/ Such as the case of India as argued by V.M. Dandekar and N. Rath cited in Srinivasan [57]. This claim was however refuted by Srinivasan [57] as well as Ahluwalia [5]

2/ As quoted in De Wulf [17, p. 61].

3/ For details of computation techniques, data management and fuller results, see Krongkaew [28], [29].

4/ See Krongkaew [28] for more detail on this point.

5/ When this income concept in used in the part which discusses tax incidence it will be returned 'pre-tax' income, and 'pre-benefit" income in expenditure incidence part. They are all the same income.

6/ Mainly because of this, the word tax and revenue are often used interchangeably. The word "tax" of course connotes the feeling of burden better than the word "revenue" particularly when used with the word incidence. Therefore, instead of using "incidence of public revenue" this paper uses "incidence of taxes"; the meaning is the same.

7/ This budget cycle is explained in some detail so as to show the steps involved in the spending of public money. This may have some bearings upon the speed at which an ordinary expenditure get spent.

8/ Due to lack of space it is not possible to repeat all the full rationale behind each assumption made. Those who do not find these assumptions convincing or realistic could find detailed defence and explanation in Krongkaew [28] and [32].

9/ For a very interesting study on the distributive impact of taxes on petroleum products in Thailand, see Panipibul [51].

10/ Again, the detail in referred to Krongkaew [28] [32].

11/ The author has later found out that this assumption gave too much bias in favour of lower-income households, and was much responsible for making the entire expenditure program more "pro-poor" than it should be. However this obvious distortion was not great due to the small size of health expenditures, but the reader should take note of this situation when interpreting the result of public expenditure incidence at the end of this chapter.

12/ How high are the profit rates for promoted firms in general or whether these rates are higher than those of non-promoted firm is not yet known. But such profit rates could be computed from financial statements filed annually with the Department of Trade Registration.

13/ As of early 1979, the Government is considering giving promotional privileges to the construction of several deluxe class hotels in Bangkok at the time when everyone can see that this is a good prospect and many private investors have planned to invest on their own anyway whether there are bpulic incentives or not. This is the type of investment promotion which is neither justified nor necessary.

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